Public Utilities

Volume 60 No. 1 July 4, 1957

BUSINESS ADMINISTRATION LIBRARY BOSTON UNIVERSITY

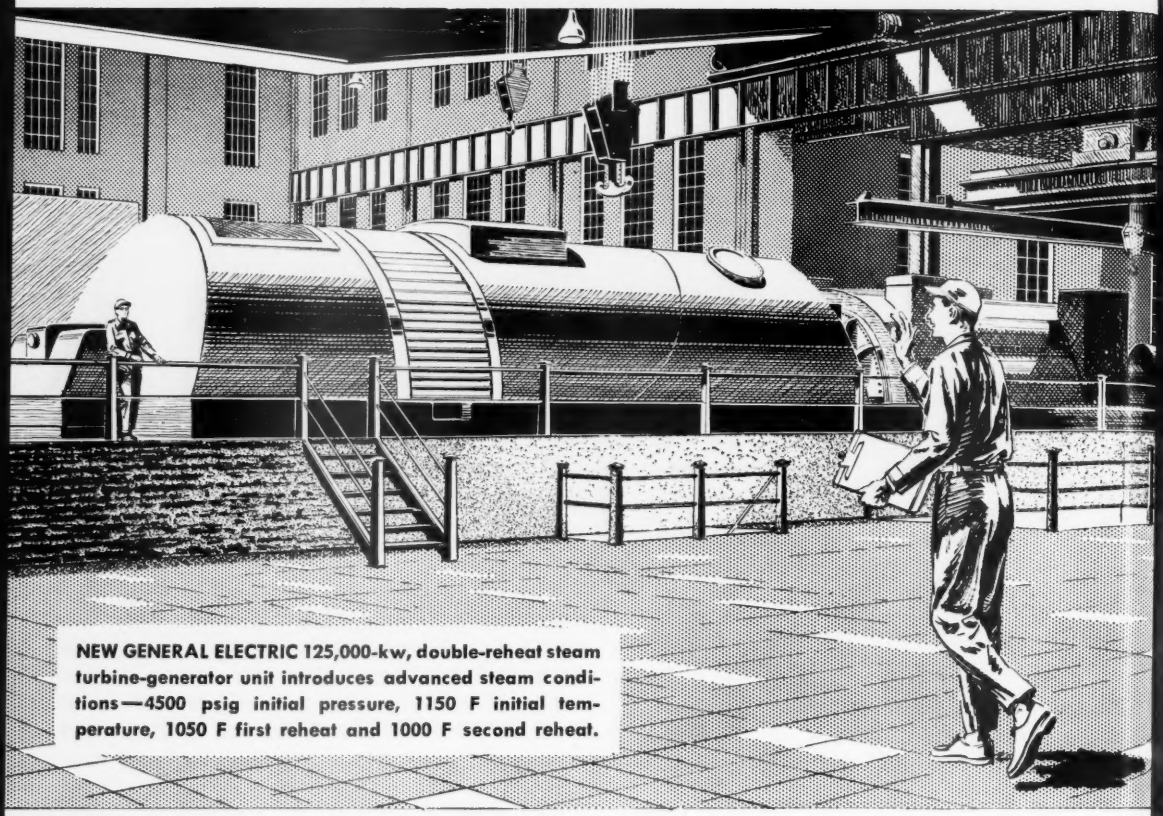
FURTHER ASPECTS OF FAIR RATE OF RETURN
By William H. Howe

Postdisaster Continuity of Utility Management
By Ralph V. H. Wood

The Taxpayer Subsidizes Government Power Projects
By Ernest R. Abrams

EEI's Annual Convention

PROGRESS IN TURBINE-GENERATORS



NEW GENERAL ELECTRIC 125,000-kw, double-reheat steam turbine-generator unit introduces advanced steam conditions—4500 psig initial pressure, 1150 F initial temperature, 1050 F first reheat and 1000 F second reheat.

New General Electric steam turbine at American Gas and Electric System's Philo Plant opens way to . . .

New Economies in Electric Power Generation

The new General Electric 125,000-kw, supercritical-pressure turbine marks a new milestone in the progress of steam turbine-generator technology. By taking advantage of the thermodynamic gains that can be realized with the use of these higher pressures and temperatures, steam stations will be able to extract still more power from every pound of fuel burned—thus helping to keep electricity today's greatest bargain.

In building this turbine for the Ohio Power Company's Philo Plant some new and forward-looking design concepts were introduced. Representing the first major step in increasing pressure since a maximum of 2300 psig was reached in the early 1940's, this turbine operates at the supercritical pressure of 4500 psig—almost double the highest pressure used for power generation in this country to date.

THE EXPERIENCE GAINED during the design and manufacture of this first supercritical-pressure steam turbine is already being applied to the construction of larger units for even more economical operation. Operation of this Philo unit will provide valuable experience in evaluating the economies of higher pressures and temperatures. For more information write for bulletin GER-1130, Large Steam Turbine-Generator Department, General Electric Company, Schenectady 5, New York. 25-59

Progress Is Our Most Important Product

GENERAL ELECTRIC

Editor-in-Chief • ELLSWORTH NICHOLS
Editorial Consultant • HENRY C. SPURR
Editor • FRANCIS X. WELCH
Associate Editors • RALPH S. CHILD
FRANKLIN J. TOBEY, JR.
NEIL H. DUFFY
NORMAN J. BARATT
GEORGE E. TURNER
Assistant Editors • M. C. MCCARTHY
M. L. WILLIAMS
Financial Editor • OWEN ELY

Advertising Manager • E. L. COOKE
Circulation Manager • E. S. STEVENS

REPRINTS OF ARTICLES
(200 or more copies)
available on orders received within 30 days after publication date.
Address
WASHINGTON OFFICE
for quotations.

PUBLIC UTILITIES FORTNIGHTLY . . stands for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.

Subscriptions: Address correspondence to PUBLIC UTILITIES FORTNIGHTLY, circulation department, 332 Pennsylvania Building, Washington 4, D. C. Allow one month for change of address.

Single copies $1.00. Annual subscription price (26 issues a year): United States and possessions, $15.00; Pan American countries, $15.00; Canada, $16.00; all other countries, $17.50.

Entered as second-class matter April 29, 1915, under the Act of March 3, 1879, at the Post Office at Baltimore, Md., December 31, 1936. Copyrighted 1957, by Public Utilities Reports, Inc. Printed in U. S. A.

Public Utilities FORTNIGHTLY

VOLUME 60 JULY 4, 1957 NUMBER 1

ARTICLES

Further Aspects of Fair Rate of Return ..... *William H. Howe* 1
What must be provided for in fixing a reasonable rate of return for debt service?

Postdisaster Continuity of Utility Management ..... *Ralph V. H. Wood* 10
How are utilities organized to carry on following atom bomb attacks or other devastating experiences?

The Taxpayer Subsidizes Government Power Projects ..... *Ernest R. Abrams* 20
Is TVA a "bankable" proposition? Is it paying its way, and, if not, to what extent is it subsidized?

FEATURE SECTIONS

Washington and the Utilities 27
Telephone and Telegraph 31
Financial News and Comment ..... *Owen Ely* 34
What Others Think 43
EEI's Annual Convention 43
Capital Replacement: A Dilemma of Inflation 50
Regulation and Independent Telephony 53
The March of Events 54
Progress of Regulation 57
Industrial Progress 25
• *Pages with the Editors* . 6 • *Utilities Almanack* 21
• *Coming in the Next Issue* 10 • *Frontispiece* 22
• *Remarkable Remarks* .. 12 • *Index to Advertisers* .. 38

PUBLIC UTILITIES REPORTS, INC., PUBLISHERS
Executive, Editorial & Advertising Offices .....332 PENNSYLVANIA BLDG., WASHINGTON 4, D. C.
Publication Office .....CANDLER BUILDING, BALTIMORE 2, MD.
Advertising Representatives:
New York 6: Robert S. Farley, 111 Broadway, COrtland 7-6638
Cleveland 15: Macintyre-Simpson & Woods, 1900 Euclid Avenue, CHerry 1-1501
Chicago 1: Macintyre-Simpson & Woods, 75 E. Wacker Drive, CEntral 6-1715
Pacific Coast: M. D. Pugh & Associates
2721 No. Marengo Avenue, Altadena, Calif. SYcamore 7-2894
and
1050 Lincoln Avenue, Palo Alto, Calif. DAvenport 5-4815

Philo Plant of Ohio Power Company on American Gas & E
System. Stack in front is for the new Supercritical Unit.

B&W's Universal Pressure Steam Generator

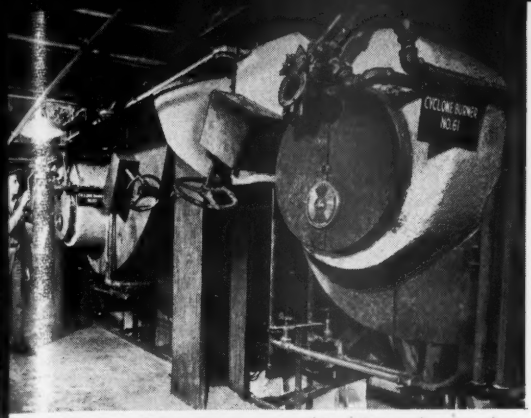
Helps Philo Plant Open the Way to New Economies in Steam-Electric Generati

Generating history is being made at the Philo Plant of the Ohio Power Company on the American Gas & Electric System. Here, America's first commercial supercritical pressure steam-electric unit is in operation, probing the frontiers for new economies in the production of energy.

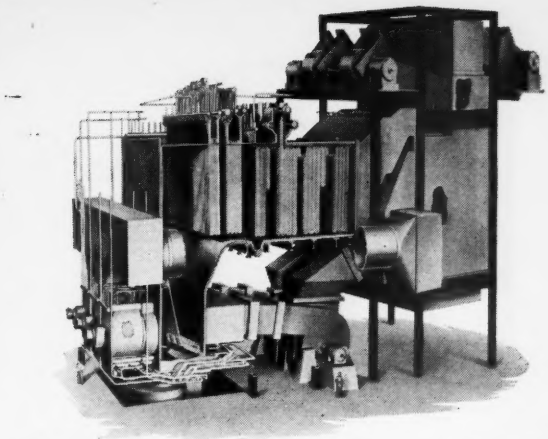
A Symbol of the Vision and progressiveness of America's public utilities and their suppliers, Philo is a landmark in engineering history. It is the result of years of engineering, research, and development that solved the many problems which had stood in the way of greater plant efficiency that comes with the h possible combination of pressure and temperatu

The Problems Solved included the very difficul of feedwater chemistry, of heat transfer and cont internal deposits, metallurgy for higher temper combined with higher pressures, and developm control and operating techniques.

Philo's Supercritical Unit, with a turbo-gen operating at 4500 psi and 1150F, is producing 120,000 kw, in the same space and using 4 pe less fuel per kwhr than the 40,000 kw unit it rep

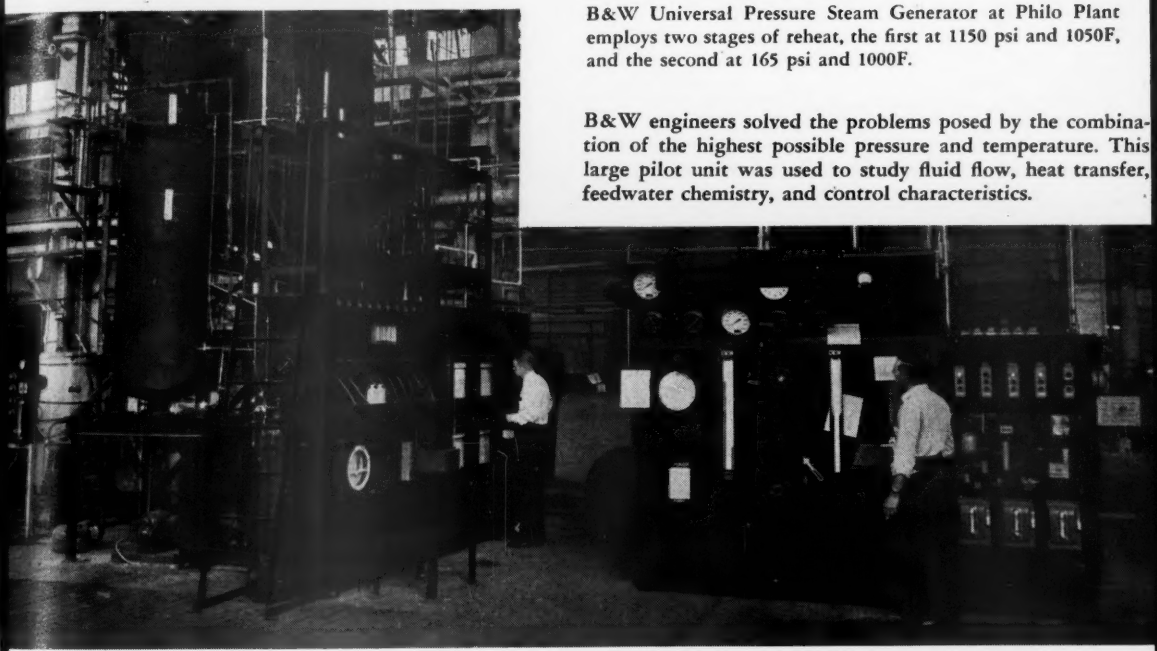


B&W Cyclone Furnaces assure rapid and complete combus-
with minimum fly ash discharge and maintenance.



B&W Universal Pressure Steam Generator at Philo Plant employs two stages of reheat, the first at 1150 psi and 1050F, and the second at 165 psi and 1000F.

B&W engineers solved the problems posed by the combination of the highest possible pressure and temperature. This large pilot unit was used to study fluid flow, heat transfer, feedwater chemistry, and control characteristics.



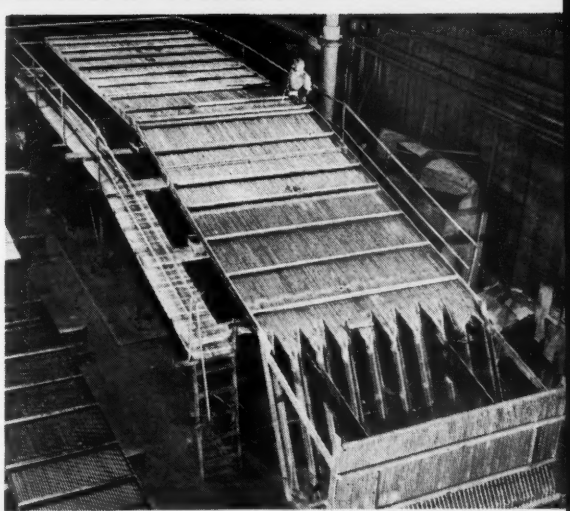
o More B&W Universal Pressure Steam Gen-
rs are now being built for The American Gas &
ic System. Together these will produce 900,000
enough to supply residential power for a city of
,000. Like Philo, they will continue to push
rd this new frontier in steam generation.

rly a Century of B&W leadership in steam
ation stands behind these achievements. The
ock & Wilcox Company, Boiler Division, 161
2nd Street, New York 17, N. Y.

G-833-CS

BABCOCK & WILCOX

BOILER DIVISION



Shop assembly of secondary front wall. Pre-assembly of many components for the Universal Pressure Steam Generator greatly speeded field erection.

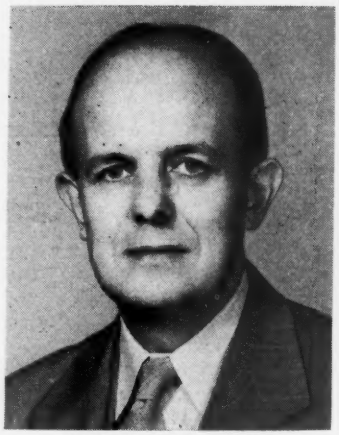
Pages with the Editors

THERE can be little doubt that the three major branches of the public utility industry—gas, electric, and telephone—have seen successive improvements in the status of their financing during the last two decades. Bonds have progressively improved in ratings and junior securities have become increasingly sought after by large-scale investors. This reflects an excellence of performance on the part of management as well as public faith in the stabilizing influence of commission regulation.

IT is a record which should insure the ability of these industries to obtain additional funds to meet the constantly growing demand for new plant. But like most rosy pictures there is the inevitable cloud on the horizon. And the cloud very clearly to be seen in this picture is inflation, and the continued depreciation of the dollar.

OF course, the threat of inflation exists everywhere in the world today. It has increased the demand for capital without increasing supply of savings. In our own country it has led to a so-called "tight money" situation. Cost of capital through bond issues has increased on the average of one per cent every year while the yields on common stock have not increased.

WILLIAM H. HOWE



RALPH V. H. WOOD

So, it is going to be difficult for utility managements and state regulatory commissions to maintain the present high standing of utility securities. The tightening money market, with the increased cost of debt capital, is a factor which is giving increasing concern and apprehension not only to utility management but regulatory agencies as well.

THE opening article in this issue comes from WILLIAM H. HOWE, chief engineer of the Arizona Corporation Commission, who discusses what is necessary to provide in fixing the rate of return for debt service, as well as stock dividends, of electric utilities and other forms of electric utility enterprises. MR. HOWE is a graduate of Stanford University with a degree (BS '22) in civil engineering. He started his career with the Salt River Valley Water Users Association when it was a Bureau of Reclamation project. After some other engineering experience with Worthington Pump & Machinery Corporation, MR. HOWE became commercial manager for the old Tucson Gas, Electric Light & Power Company in 1933. He later became director and division manager of Public Service Company of New Mexico, and in 1951 entered the service of the Arizona Corporation Commission

"Time Teaches Many Lessons"*

*Aeschylus 540 B. C.

Ferdinand de Lesseps:

de Lesseps vision, the Panama Canal, inspired American engineers to titanic efforts—making the idea a reality. Tropical climate and terrain took a heavy toll in men and materials. But the lessons learned by a generation of canal builders—from 1882 to 1914—have never been forgotten.

In 1908, fifty miles of Kerite cable helped speed the completion of de Lesseps tremendous venture. Laid over jungle swamps and scarps, a thirty-mile length of this cable was submerged in the Gatun Lake. Based on the unfailing operation of the first cable, a second Kerite installation was completed in 1918. Time—more than 100 years of it—has taught successive generations of Kerite engineers that there can be no compromise with quality or integrity.

The value and service life of a product can be no greater than the integrity and craftsmanship of its maker.

Founded 1854

KERITE CABLE

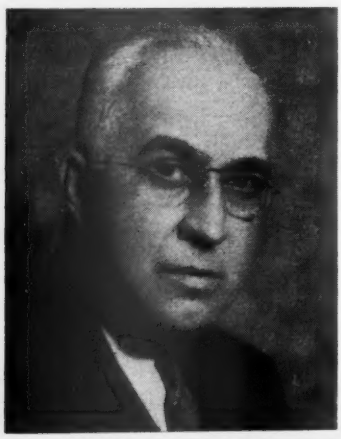
THE KERITE COMPANY—30 Church St., New York 7, N. Y.
Offices also at 122 S. Michigan Ave., Chicago; 582 Market St., San Francisco; 3901 San Fernando Rd., Glendale 4, Calif.; 31 St. James Ave., Boston; 4101 San Jacinto, Houston 4, Texas; 1010 Euclid Avenue, Cleveland 17, Ohio; 29 West Lancaster Avenue, Ardmore, Pa.

as chief engineer for the commission.

* * * *

WITH all this talk of an atom bomb attack and other kinds of catastrophic emergencies, how are utilities organized to carry on following such devastating experiences? In his article, beginning on page 10, RALPH V. H. WOOD, director of the defense department of the Philadelphia Electric Company, discusses the plans that can be made for the post-disaster continuity of public utility operations. The protection and assembly of management, the re-establishment of lines of authority and operating supervision are considered in a practical and objective way. MR. WOOD is a native of Pennsylvania and is a graduate of the University of Pennsylvania Wharton School. He has been employed by Philadelphia Electric since 1927.

IN addition to his company duties, MR. WOOD is chairman of the Pennsylvania Electric Association's defense co-ordination committee, director of the plan protection division of the Philadelphia Civil Defense Council, and a member of the American Ordnance Association. He was project officer of the Edison Electric Institute for the atomic blast test at Yucca Flats, Nevada, last year to determine the effect of atomic explosions on utility facilities and installations. Participating in the test, he also served as liaison officer with the Federal Civil Defense Administration and the Atomic Energy Commission.



ERNEST R. ABRAMS

IN connection with MR. WOOD's article, we were interested in a recent account of how some large nonutility companies have been thinking about precautions for "post-catastrophe" operations. One such large company has supplied 16 centers around the country with pay checks in $25 and $100 denominations that may never be handed out to employees. They are being kept on hand "just in case." Another big company has purchased a "nursing home" some distance from the home office. It is stocked with food which is kept continuously fresh by arrangements with a caterer. That food may never be eaten.

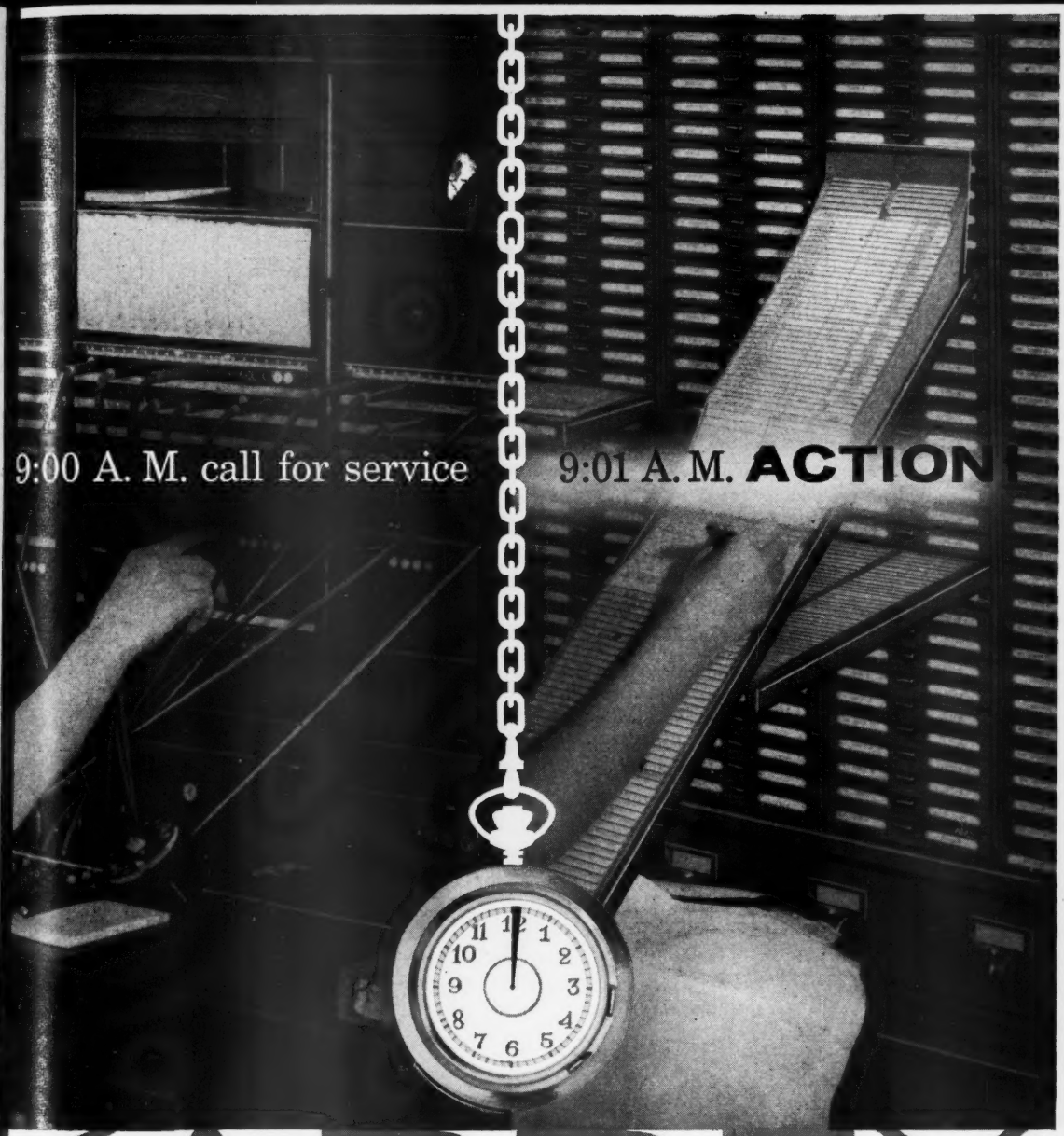
A THIRD company is even said to be thinking seriously of building a production plant in a cave which it already owns. The idea would be to keep production going with available facilities, "just in case." These precautions, some say, are fantastic. But when hardheaded business management considers the hazard real enough to make such investments, other people with less at stake might well take heed.

* * * *

SINCE TVA is the most publicized federal project of its kind, and since it is engaged in a variety of activities, including flood control, navigation improvement, etc., an analysis of TVA operations might be regarded as a measurement to some extent of all federal power operations. ERNEST R. ABRAMS, well-known writer of business articles, in his article beginning on page 20 has approached this analysis from the standpoint of answering such questions as whether TVA is a "bankable" proposition, whether it is paying its way, and, if not, to what extent it is subsidized. This sort of article has been done often before, but MR. ABRAMS takes an original slant and also answers some of the claims made as to the tremendous economic benefits of government power projects.

THE next number of this magazine will be out July 18th.

The Editors



KARDEX®

akes it possible—twenty-four hours a day

matter what time of day or night a call for serv- comes in—KARDEX Customer Service Location ord enables you to serve customers *promptly and ient*ly. Result? Maximum customer good will at imum operating cost.

When a call for service is relayed to the clerk at KARDEX cabinet containing the records of the er, the facts are noted on both a Master and ter Order Card. Because the Meter Order Card avels" as the order, *no further writing is necessary* —and within *60 seconds after the call* is completed the Meter Order Card is on its way to the dispatcher for action.

To learn of the many advantages of this system for serving and satisfying, write for FREE illustrated folder "New Horizons In Public Service" to Room 1759, 315 Fourth Avenue, New York 10, New York.

Remington Rand

DIVISION OF SPERRY RAND CORPORATION

Coming IN THE NEXT ISSUE

(July 18, 1957, issue)

★

GREATER PRODUCTIVITY: KEY TO THE TRANSIT PARADOX

Are we further than ever from a solution of our urban problem with respect to transportation? Why is it, despite a multiplicity of new highways, superhighways, bridges, tunnels, our traffic congestion grows worse? And why do the attempts to control parking restrictions, one-way streets, and other measures only seem to make matters worse? E. L. Tennyson, transit operations engineer of the city of Philadelphia, and Robert L. Banks, transportation consultant of Washington, D. C., have written an analytical article about the woes of urban transportation, especially as it relates to transit utilities. The key to the problem, they think, lies in creating an increase in the productivity of transit. Whether the reader agrees or not, he will be stimulated by this informative discussion from two well-qualified authors.

"HARD MONEY" AND PUBLIC UTILITIES

Recently a statement was made on the floor of Congress that the so-called "hard money" policy of the Eisenhower administration is going to saddle gas, electric, and telephone customers with higher rates over the next twenty to thirty years. This statement was made by a government ownership advocate whose real concern may have been that the higher cost for capital is putting pressure on federal power and other tax-exempt agencies to finance their operations on a more self-supporting basis. Obviously, with the federal government paying more than 3 per cent for borrowed funds—some of which REA lends to the farmers at 2 per cent—there is increasing pressure on the federal government to practice what it preaches and raise interest rates on federal lending. But, is it true that the increased cost of capital is especially detrimental to public utility operations or will it of itself result in higher operating costs? Herbert Bratter, Washington economist and professional writer of business articles, finds a very contrary indication; namely, that a resumption of "cheap money" with a probable stimulation of inflation would have a far more detrimental effect on utility economics.

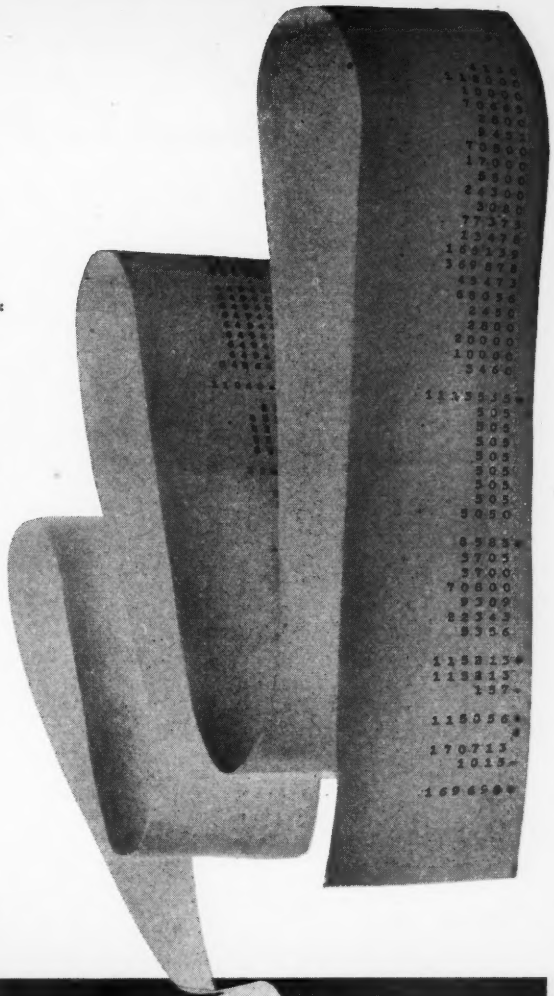
REA COMES OF AGE

On May 20, 1957, the REA, a brain child of the first New Deal, reached the age of maturity—it became twenty-one. In the life of an individual this is the age when a young man is supposed to be self-supporting, or at least assume responsibility for his own life and decisions. Is REA self-supporting or is it still tied to the apron strings of a political bureaucracy which gave birth to it? John J. Hassett, professional writer, has made an interesting summary using a rather unusual approach in which he reviews the present status and future outlook of REA. To the question of whether REA is coming or going, the answer seems to be a qualified "both."

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***

Convert this paper into cash income!

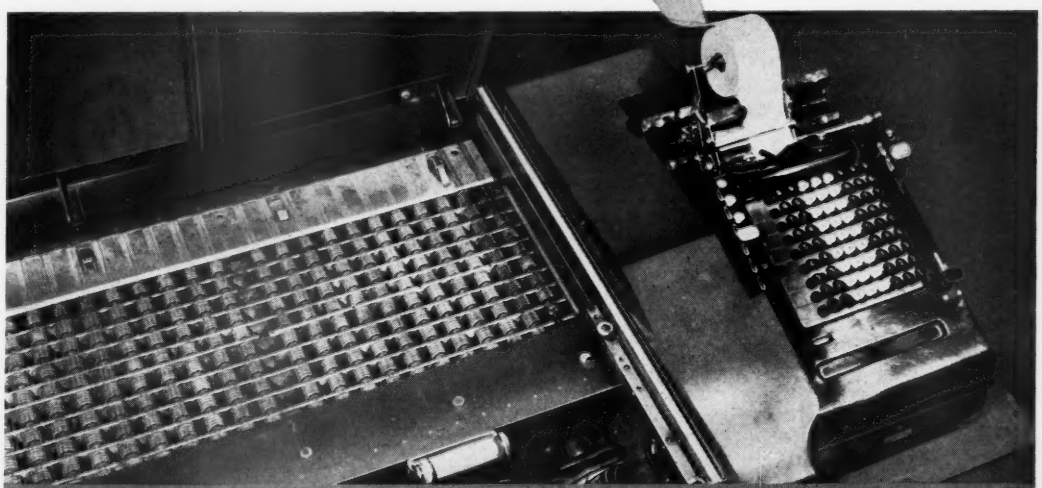


Send your monthly customer billing tapes or Bill Register Sheets to us for analysis by our "Bill Frequency Analyzer."* We'll come up with reports that can *protect and increase* your revenues.

In "one step" the Bill Frequency Analyzer converts figures so swiftly and accurately, you get rate analyses in a matter of weeks instead of the months required by other methods. You get comparative figures when they mean something, changes in consumption patterns are spotted immediately. A *12 month analysis* as opposed to a few month's "sampling" is not open to question when figures are submitted to Rate-Commissions.

R & S specializes in serving utility companies throughout the country — whatever is needed — minimums, demand rates, reports in any form, R & S is *your data processing center.*

WRITE Dept. P-1 for our booklet, *"The One Step Method of Bill Analysis"* it describes this service in detail.



RECORDING & STATISTICAL CORPORATION

"Your key to better figures since 1911"

100 SIXTH AVENUE • NEW YORK 13, N. Y.

***exclusive with R&S—the oldest and largest punched card service bureau in the United States. Offering every facility for fast, accurate data processing—continuing or peak-load.**

Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

GEORGE M. HUMPHREY
Secretary of the Treasury.

"In America today, a man cannot earn a living with just two hands. He needs tools and power and these you cannot get without investment."

FREDERICK R. KAPPEL
President, American Telephone and Telegraph Company.

"In these times of unprecedented growth, with the need to obtain billions of dollars of new capital from investors, earnings above present levels are required."

Excerpt from American Public Service Bureau Bulletin.

"The one conspicuous place where you can plant most of the responsibility for this modern Moloch [inflation], which is consuming the substance of America, is cost of government."

ARCH N. BOOTH
Executive vice president, Chamber of Commerce of the United States.

"Your Senators and Representatives—when they are called upon to make decisions on important national issues—cannot truly represent you unless they know your views on those issues—and your reasons."

EDITORIAL STATEMENT
The Wall Street Journal.

"For free men the real challenge of the future was put by Herbert Hoover when he said that 'the greatest issue in America and all mankind is the encroachments of government to master our lives.' How that challenge is met will determine more than the future of a party. It will determine the future of the nation."

WILLIAM T. FARICY
President, Association of American Railroads.

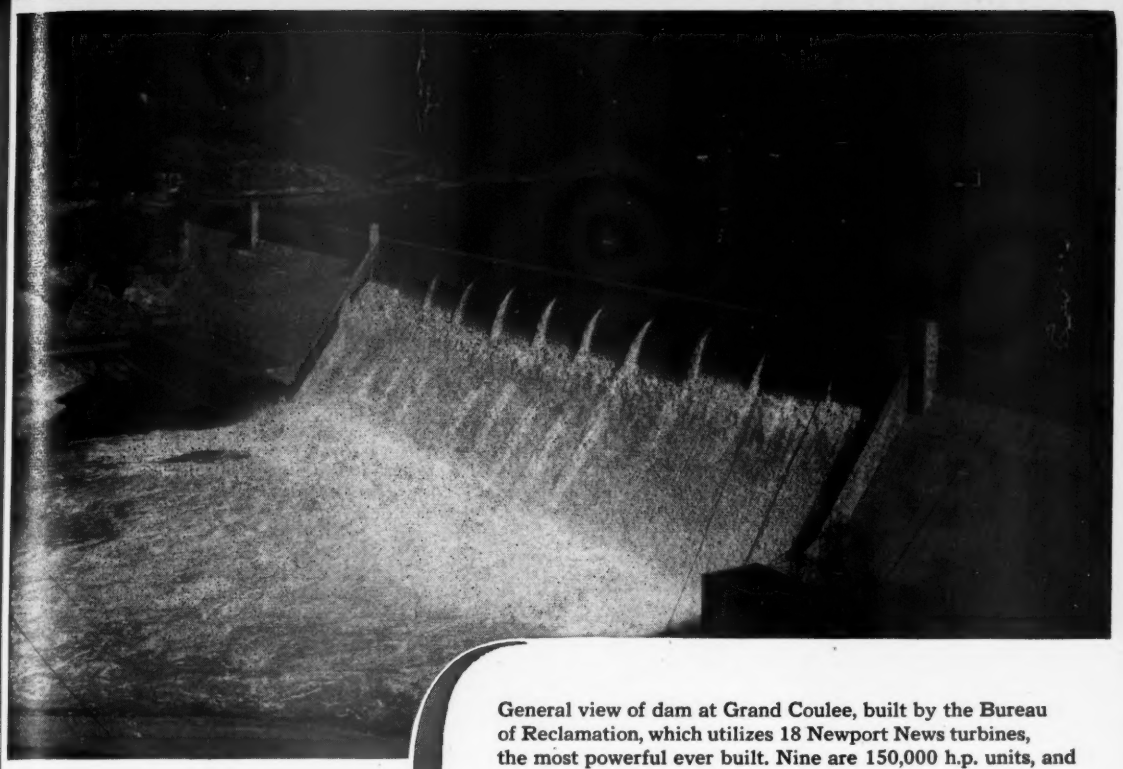
"Finding $637 million a year for new freight cars is made vastly more difficult by the combination of the low level of railroad earnings, the 52 per cent corporate federal income tax on those earnings, and the inflationary pressures which have rendered depreciation reserves completely inadequate for the replacement of worn-out equipment."

THE REVEREND JAMES W. FIFIELD, JR.
Pastor, First Congregational Church, Los Angeles, California.

"People have lost the will to work hard, have lost their sense of pride in artisanship, have lost the thrill of making decisions and living as free men. And why not, when government volunteers baby sit for us from the cradle to the grave and assume responsibility for our care of our loved ones, a responsibility each of us considered a sacred privilege."

DEANE W. MALLOTT
President, Cornell University.

"One who is a doer only acts either blindly or under compulsion of others. . . . Valid opinion must be accompanied by a sense of grounded reality. Inventors and scientists reach out a little further than the others, but are chained to the past and to the present. Those who reach too far and too unwisely become the crackpots that inhabit every day and age."



General view of dam at Grand Coulee, built by the Bureau of Reclamation, which utilizes 18 Newport News turbines, the most powerful ever built. Nine are 150,000 h.p. units, and the other nine are rated at 165,000 h.p. each.

Specialists . . . in building Water Power Equipment

Typical Users of Newport News Equipment

PLANT	LOCATION
Boone	Tennessee
Buchanan	Texas
Caonillas	Puerto Rico
Chief Joseph	Washington
Clark Hill	South Carolina
Deer Lake	Newfoundland
Folsom	California
Fort Patrick Henry	Tennessee
Hiwassee	Tennessee
Hoover	Nevada
J. H. Kerr	Virginia
Jim Woodruff	Florida
Lower Salmon	Idaho
Norris	Tennessee
Rock Creek	California
Santee-Cooper	South Carolina
C. J. Strike	Idaho
Whitney	Texas
Wilson	Alabama

Turbines designed and built for the world's largest development at Grand Coulee... and for other hydroelectric installations in America and various parts of the world... bespeak the skill and facilities offered by Newport News.

This trained organization has filled hydroelectric turbine contracts with an aggregate rated output of 7,000,000 horsepower.

Other equipment designed and built by Newport News includes penstocks, pressure regulators, valves, pumps, gates and rack rakes. Upon request, a copy of our illustrated booklet entitled "WATER POWER EQUIPMENT" will be sent to you.

Newport News
SHIPBUILDING AND DRY DOCK COMPANY
Newport News, Virginia

NEW UTILITY STATIONS, C-E EQUIPPED

Includes only *new* stations on *new* sites placed in operation since JANUARY 1, 1950.

LAKE CATHERINE
HUTCHISON
YATES
DUNKIRK
TITUS
LEE
CONTRA COSTA
HAWTHORN
NINEMILE POINT
EDGE MOOR
PALATKA
JOHNSONVILLE
DANSKAMMER
BECKJORD
HIGHGROVE
PLANT X
BLACK DOG
ALBANY
JOPPA
MERAMEC
PORTSMOUTH
LAKE CREEK
ETIWANDA
AURORA
HENNEPIN
EASTLAKE
OAK CREEK
SUWANNEE RIVER
URQUHART
KINGSTON
SANDOW
MULLERGREN
BARRY
NORTH OMAHA
WILMINGTON
CARBON
SAGUARO
MORRO BAY
VERMILION
JOHN SEVIER
COLLIN
MILLIKEN
GALLATIN

NEW BARRETT

recently

BARRETT

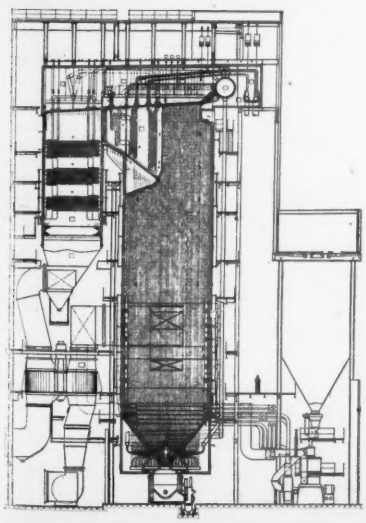
T POWER STATION
ly dedicated

On May 28th, the Long Island Lighting Company formally dedicated its new Edward F. Barrett Power Station, which had initially been placed in service in the latter part of 1956.

Named for Mr. Barrett, Chairman of the Board of LILCO, the new station has made available an additional 185,000 kilowatts to the rapidly growing requirements of Nassau and Suffolk counties. The extent of this growth is best illustrated by the fact that 10 years ago this single new unit could have met the peak demands of the entire LILCO system.

This fine new station is located on 128 acres of reclaimed marsh land near the village of Island Park. A tremendous amount of site preparation was necessary including the driving of some 3,100 foundation piles and the use of many thousands of yards of fill. Plans include complete landscaping of the site and special emphasis on noise and air pollution control.

The new turbine-generator is served by a C-E Radiant Reheat Boiler Unit, a cross-sectional elevation and brief description of which appears below.



The C-E Unit shown at the left is now in service at the Barrett Station. It is of the radiant-reheat type with a reheater section located between the primary and secondary superheater surfaces. An economizer section is located below the rear superheater section and regenerative type air heaters follow the economizer surface. This unit is designed to supply steam at a throttle pressure of 1800 psig with a primary steam temperature of 1005 F, reheated to 1005 F. It is pulverized coal fired using bowl mills and tilting, tangential burners. Arrangements are made for alternate use of oil as required.

COMBUSTION ENGINEERING

Combustion Engineering Building
200 Madison Avenue, New York 16, N. Y.

B-972A

all types of steam generating, fuel burning and related equipment; nuclear reactors; paper mill equipment; pulverizers; flash drying systems; pressure vessels; soil pipe

New compressor stations, like the one pictured above, are constantly being built to the steadily increasing demands for natural gas. These compressor stations pump natur through Columbia's 36,716 miles of pipeline to homes and industries in America's Hear

Columbia's Thinking Is *Constructive*

Customers in the area served by the Columbia Gas System keep calling for more and more natural gas —to meet a constantly increasing need for energy. To supply it, facilities with greater capacity must be constructed—new or enlarged compressing stations, pipe lines, metering stations and other equipment. So Columbia must think constructively!

During the past decade, the Columbia Gas System has spent more than a half billion dollars for construction. This year alone, Columbia expects to spend about $87 million on new facilities—to meet immediate and future natural gas requirements of more than three million families, businesses and industries in the dynamic and growing Heartland of American commerce and industry.

Where System companies serve within this seven-state Heartland—Pennsylvania, Ohio, West Virginia, Virginia, Kentucky, Maryland and southern New York—Columbia's residential sales have doubled, its househeating customers have increased almost three-fold in just ten years.

Growth in the Heartland shows no signs of diminishing . . . so to keep pace with the Heartland's growth, to provide the facilities and the service a growing number of customers require, Columbia thinks and plans constructively for the future.

serving homes and industry in America's Heartland

COLUMBIA GAS SYSTEM

THE COLUMBIA GAS SYSTEM, INC.

COLUMBIA GAS SYSTEM SERVICE CORPORATION

120 East 41st Street, New York 17, N.Y.

CHARLESTON GROUP: United Fuel Gas Company, Amere Gas Utilities Company, Atlantic Seaboard Corporation, Central Kentucky Natural Gas Company, Virginia Gas Distribution Corporation, Kentucky Gas Transmission Corporation
COLUMBUS GROUP: The Ohio Fuel Gas Company . . . **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Columbia Gas of New York, Inc., Cumberland and Allegheny Gas Company, Home Gas Company

. . . The appropriate power
for your expanding program

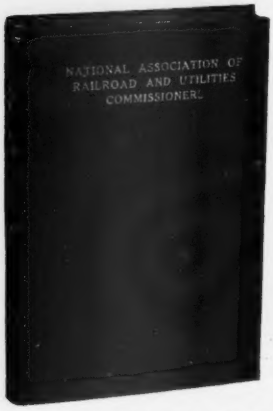
Send for our descriptive booklet, "Pioneering New Horizons" of these and other services.

55 YEARS

Pioneer Service & Engineering Co.

231 South La Salle Street • Chicago, Illinois

NOW AVAILABLE!
LIMITED EDITION!



PROCEEDINGS
1956 CONVENTION
AT SAN FRANCISCO, CALIFORNIA
NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS

THIS important edition contains valuable material on the subject of regulation of rates and services of public utilities and transportation companies including the following:

Depreciation, Valuation, Railroad Passenger Deficit and Regulation of Public Utilities. Panel discussions on the subjects of "Cost of Capital as Related to Rate Return" and "Regulatory Protection of Consumers".

Price $10.00

OTHER PUBLICATIONS OF THE ASSOCIATION

Local Service Telephone Rates
An excellent compilation of rates prepared by NARUC Subcommittee on "exchange rates" for all exchanges of Bell System, the rates of cities of 50,000 population or more for Bell and Independent exchanges, rates of borrowers from R.E.A., and tabulation of above exchanges which had ten cent coin telephone rate in effect June 30, 1954. 128 pages for use in loose leaf binder and 48 revision pages as of December 1955 and 42 revision pages as of October 1956 ..... $2.50

Message Toll Telephone Rates and Disparities
400 pages of text, tables and charts, hard back cover—a report of the NARUC-FCC Joint Toll Rate Committee. Special price 5.00

Telephone Separations Manual
Includes the 1952 addendum, the so-called Charleston Plan and the 1956 addendum, the so-called Phoenix Plan changes 2.00

Depreciation:
1943-1944 Reports of Committee on Depreciation (reprinted in one volume because of special demand). The reports present a very comprehensive and complete analysis of the problems of depreciation on public utility regulation and set forth conclusions concerning the policies and practices which should be followed in respect thereto. 326 pages, paper bound 4.50
1946—Methods of Pricing Retirements from Group Property Accounts 1.25
1948—Letter Symbols for Mathematics of Depreciation 1.00
1948—Half Cycle Methods of Estimating Service Life 1.00
1950—Remaining Life Basis of Accounting for Depreciation ..... .50
1955—Report of Committee on Depreciation (Discussion of Liberalized Depreciation under Internal Revenue Code of 1954) 1.25
1956—Report of Committee on Depreciation (Depreciation Rates for Electric Utilities) 1.00

Interpretations of Uniform System of Accounts for Electric Utilities—Cases Nos. 45 to 119 (1938 to 1955) 1.50

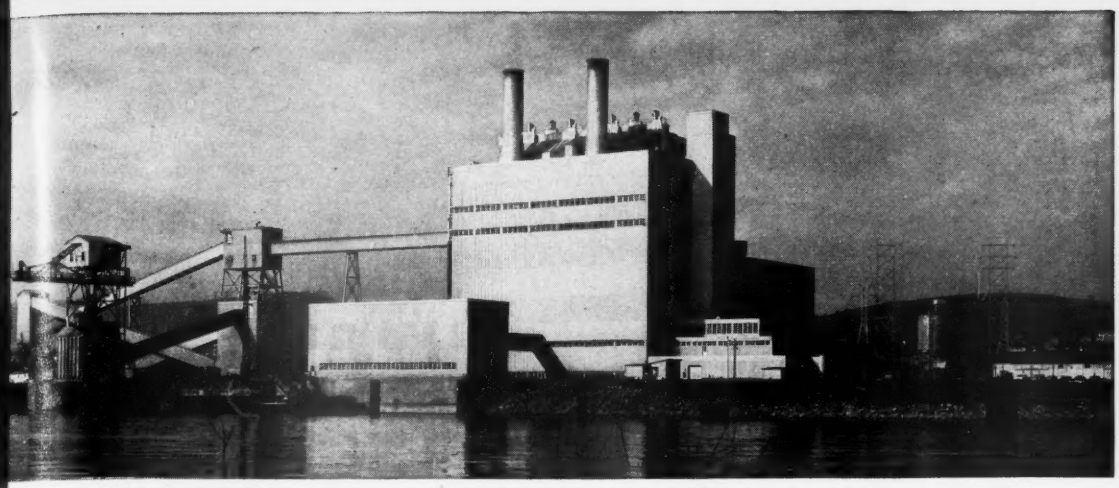
Interpretations of Uniform System of Accounts for Gas Utilities—Cases Nos. 1 to 80 (1938 to 1955) 1.50

Interpretations of Uniform System of Accounts for Water Utilities—Cases Nos. 1 to 65 (1938 to 1955) 1.50

(When remittance accompanies order, we pay forwarding charges.)

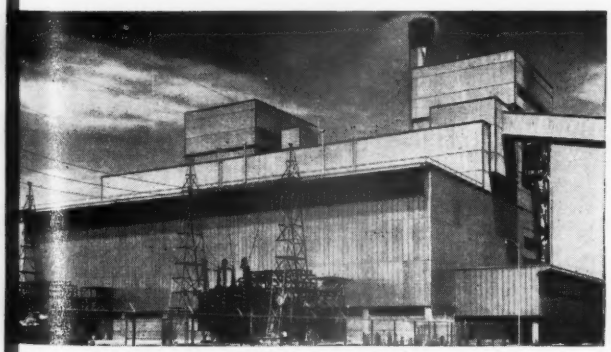
NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS

P. O. BOX 684 **WASHINGTON 4, D. C.**



Why fine new power plants everywhere have Q-Panel Walls

Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be demounted and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12″ masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



Robertson

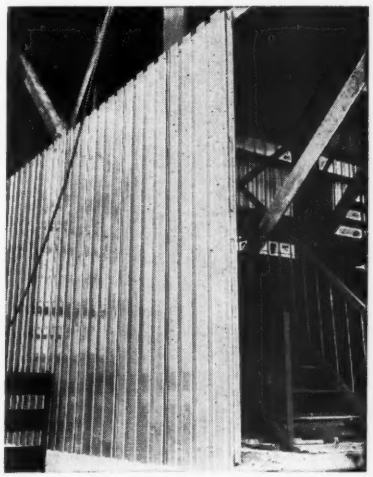
Q-Panels

H. H. Robertson Company

2424 FARMERS BANK BLDG. • PITTSBURGH 22, PA.

Offices in Principal Cities

Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.

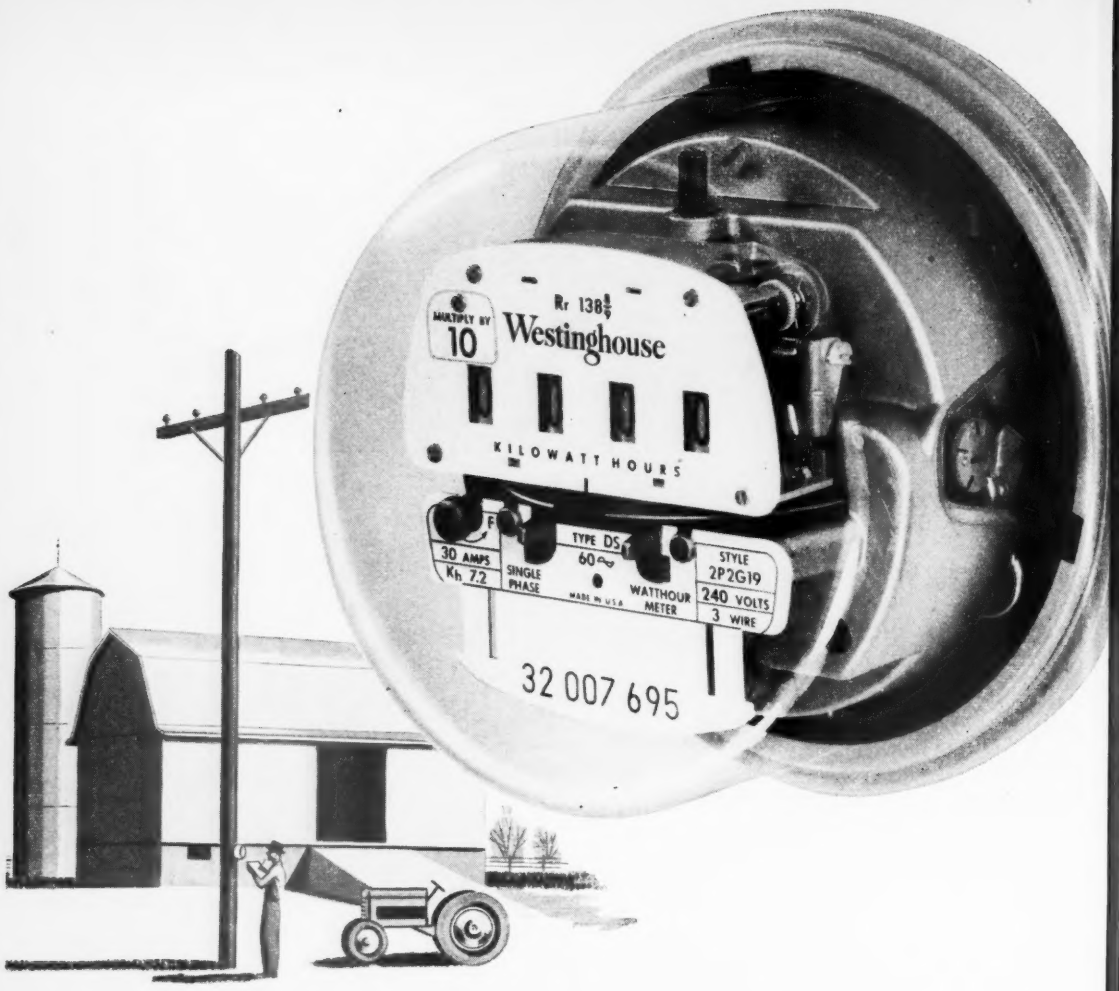
Please send a free copy of your Q-Panel Catalog.

NAME

FIRM

ADDRESS

PUF1



Westinghouse cyclometer registers make "do-it-yourself" meter reading faster, more accurate

REA "do-it-yourself" meter readers — or almost anyone else — would be hard put to make inaccurate readings on a Westinghouse cyclometer register. The large, easy-to-read numerals on a white background assure perfect legibility in the most casual of glances. "Jump advance" of all four counter drums eliminates partially obscured numerals, prevents any "in-between" readings.

Now available for all of the Westinghouse DA and DS Life-time meters, the cyclometer register resets quickly and easily. All gears are precision-milled for complete accuracy, gold-plated for protection against corrosion.

For further information about the way this cyclometer register can reduce errors in your system, contact your Westinghouse representative . . . or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pennsylvania.

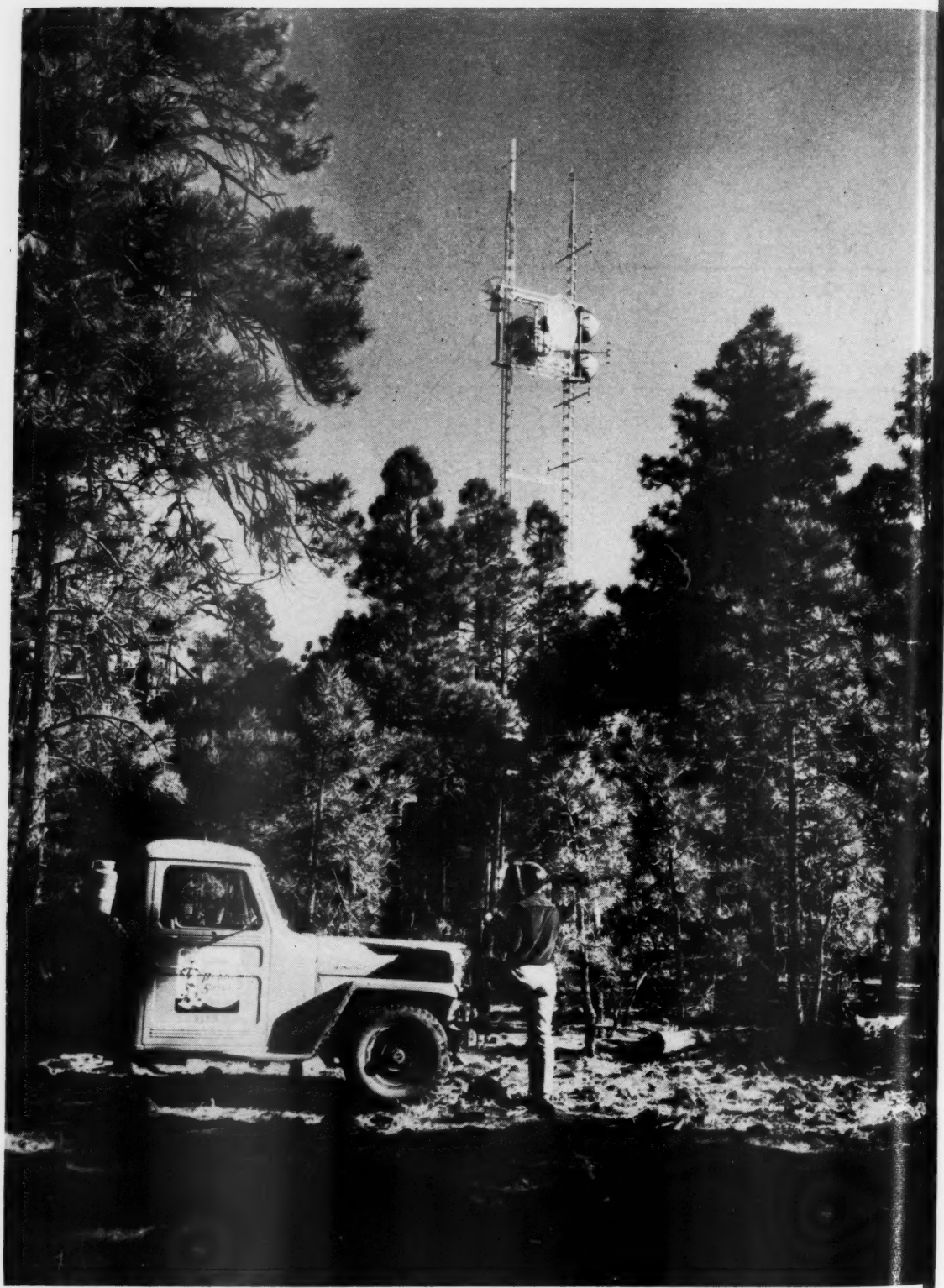
J-40499

YOU CAN BE SURE...IF IT'S Westinghouse

UTILITIES
A·l·m·a·n·a·c·k

JULY

Thursday—4 *American Bar Association will hold annual meeting, London, England, July 24-30.* ***Advance notice.***	**Friday—5** *Western Summer Radio-Television and Appliance Market will hold western merchandise mart, San Francisco, Cal. July 22-26.* ***Advance notice.***	**Saturday—6** *National Association of Claimants Compensation Attorneys ends annual convention, New York, N. Y.*	**Sunday—7** *Southeastern Electric Exchange, Personnel Administration Section, will hold conference, Richmond, Va. July 25, 26.* ***Advance notice.***
Monday—8 *National Housewares and Home Appliance Manufacturers begin exhibits, Atlantic City, N. J.*	**Tuesday—9** *University of Michigan Engineering Summer Conferences will be held, Ann Arbor, Mich. Aug. 19-30.* ***Advance notice.***	**Wednesday—10** *Western Electronic Show and Convention will be held, San Francisco, Cal. Aug. 20-23.* ***Advance notice.***	**Thursday—11** *Alaska Independent Telephone Association will hold annual meeting, Kodiak, Alaska. Aug. 26-28.* ***Advance notice.***
Friday—12 *Annual Appalachian Gas Measurement Short Course will be held, West Virginia University, Morgantown, W. Va. Aug. 26-28.* ***Advance notice.***	**Saturday—13** *American Institute of Electrical Engineers will hold Pacific general meeting, Yakima, Wash. Aug. 26-30.* ***Advance notice.***	**Sunday—14** *Pacific Coast Gas Association will hold convention, San Francisco, Cal. Sept. 3-5.* ***Advance notice.***	**Monday—15** *American Water Works Association, Wisconsin Section, will hold annual meeting, Milwaukee, Wis. Sept. 4-6.* ***Advance notice.***
Tuesday—16 *New Jersey Gas Association will hold annual meeting, Spring Lake, N. J. Sept. 6.* ***Advance notice.***	**Wednesday—17** *Independent Natural Gas Association of America will hold annual meeting, Houston, Tex. Sept. 9, 10.* ***Advance notice.***	**Thursday—18** *American Gas Association will hold industrial gas school, Pittsburgh, Pa. Sept. 9-13.* ***Advance notice.***	**Friday—19** *Instrument Society of America will hold annual instrument automation conference and exhibit, Cleveland, Ohio. Sept. 9-13.* ***Advance notice.***



Courtesy, Arizona Public Service Company

Microwave Repeater Station

Utility installation atop Mingus mountain near Prescott, Arizona.

Public Utilities
FORTNIGHTLY

Vol. 60, No. 1 July 4, 1957

Further Aspects of Fair Rate of Return

The tightening money market, with increased cost of all forms of debt capital, is a factor which is giving increasing concern and apprehension not only to utility management but regulatory agencies as well.

By WILLIAM H. HOWE*

A YEAR ago,[1] when discussing at some length the subject of the rate base as a test of fair return, I pointed out some of the legal requirements imposed upon regulatory commissions, the rate base as a test of fair return and its legal necessity, some of the leading court decisions throughout the nation with respect to rate base and its legal necessity, together with other phases of the subject.

Among those other phases and significant aspects of the subject, I discussed some of the tests of a fair rate of return which had been used by the Arizona Corporation Commission staff in its continuing studies from year to year of the various segments in the utility industry. One of the tests, then used by the Arizona staff, was a determination of the industry-wide rate of return earned by the

* Chief engineer, Arizona Corporation Commission. For additional personal note, see "Pages with the Editors."

1 "Rate Base as a Test of Fair Return Provisions," by William H. Howe, PUBLIC UTILITIES FORTNIGHTLY, May 24, 1956, Vol. 57, No. 11, p. 721.

common equity with respect to debt leverage.

Since a company's earning requirements for debt service and preferred stock dividends are fixed or contractual obligations, there remains only the common equity as a question mark or a variable. Now, the capital structures of utilities vary widely from those of rather thin equity ratios in the order of 20 per cent to 30 per cent of total capitalization all the way to those companies whose capital structures are composed entirely of common equity. Among the class A and class B electric utilities, some 12 per cent of the total number of companies have less than 30 per cent common equity in their capital structures, about 57 per cent carry from 30 per cent to 50 per cent common equity, 14 per cent of the companies have from 50 per cent to 70 per cent common equity, while the remaining 17 per cent of the companies have in excess of 70 per cent common equity with an over-all weighted average of 37.09 per cent in 1955.

WHEN I discussed the matter of return to common equity in the earlier article, the studies on the variability of this rate of return to common equity were based upon the effect of debt leverage only, and showed the relationship existing between these two factors. We were well aware of the fact these studies had not included the effects of leverage from the preferred stock together with those of debt. As a matter of fact, the Arizona staff then had under way its analyses of both debt and preferred stock leverage and their effects on the rate of return to common equity; but they were, by no means, complete at that time nor ready for presentation. Since the debt factor is about four times that of preferred stock, the additional effect of leverage from preferred stock is not as great as might be expected.

When we stop to consider the weighted average composite capital structure of the class A and class B electric companies consisted of 50.58 per cent long-term debt, 12.33 per cent preferred stock, and 37.09 per cent common equity for the year of 1955 and that the weighted average cost of debt money was 3.13 per cent, preferred stock earned 4.47 per cent in dividends and the common equity showed a return of 10.78 per cent, it is readily possible to reconcile the over-all rate of return as follows:

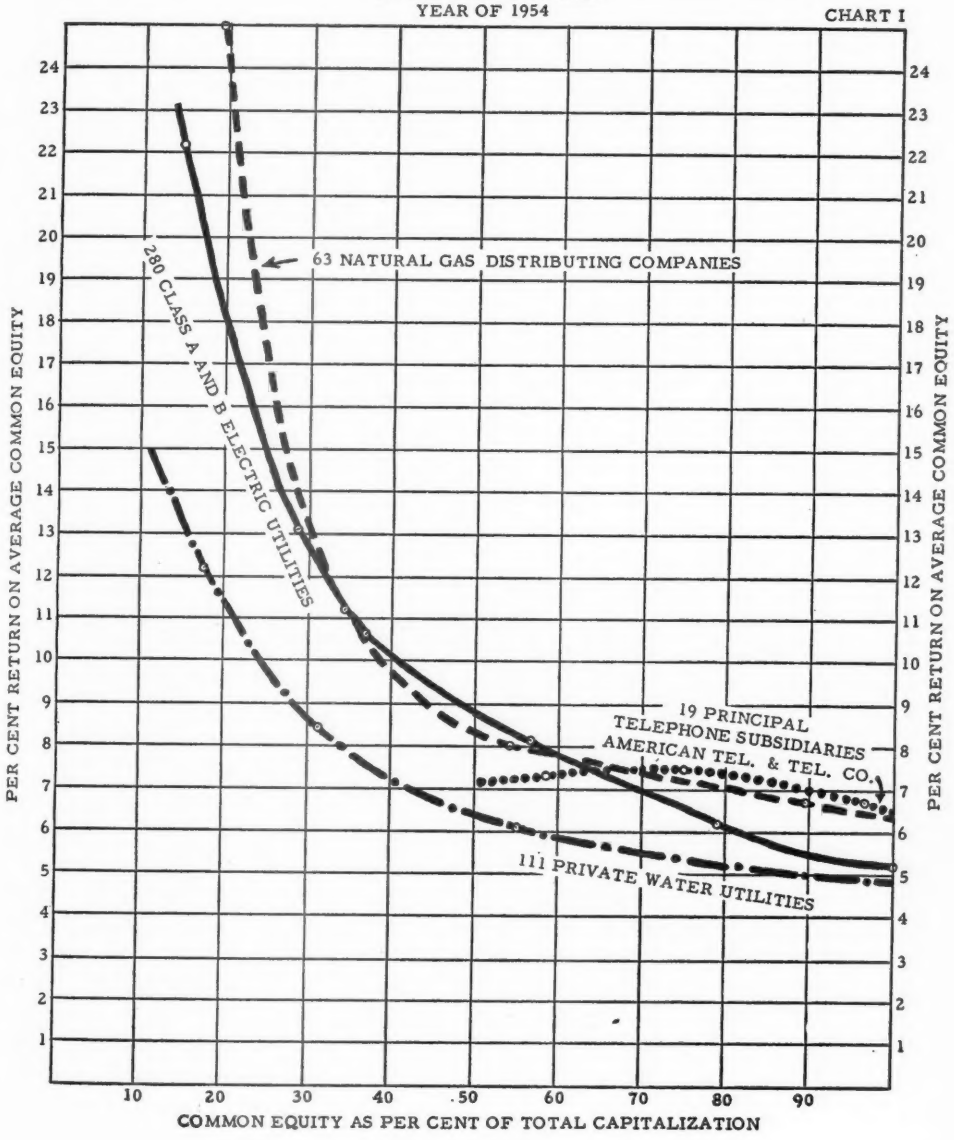
50.58%	Long-term Debt @ 3.13%	1.58%
12.33%	Preferred Stock @ 4.47%	0.55
37.09%	Common Equity @ 10.78%	4.00
100.00%	Total Capitalization @ 6.13%	6.13%

It should be noted the above figure of 6.13 per cent return on total capitalization includes 0.21 per cent of nonoperating income. After deducting the 0.21 per cent of return attributable to nonoperating income, we find net operating income provided 5.92 per cent return on average capitalization, which checks very closely with the 5.88 per cent return on average net investment realized by class A and class B electric utilities in 1955.

FROM the foregoing tabulation, it is readily apparent, on a weighted average basis, about 35 per cent of a typical electric utility's total income is required for debt service and preferred stock dividends while the remaining 65 per cent goes to common equity. Stated in another way, and after deducting 0.21 per cent of nonoperating income, about 36 per cent of the typical electrical utility's net operating income goes for debt service and preferred

GRAPH SHOWING EFFECT OF DEBT AND PREFERRED STOCK LEVERAGE
ON RATE OF RETURN TO COMMON EQUITY
PRIVATE ELECTRIC, TELEPHONE, AND NATURAL GAS DISTRIBUTING COMPANIES
IN THE UNITED STATES
YEAR OF 1954

CHART I


63 NATURAL GAS DISTRIBUTING COMPANIES
280 CLASS A AND B ELECTRIC UTILITIES
19 PRINCIPAL TELEPHONE SUBSIDIARIES
AMERICAN TEL. & TEL. CO.
111 PRIVATE WATER UTILITIES
PER CENT RETURN ON AVERAGE COMMON EQUITY
PER CENT RETURN ON AVERAGE COMMON EQUITY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
10 20 30 40 50 60 70 80 90
COMMON EQUITY AS PER CENT OF TOTAL CAPITALIZATION

stock dividends with the remaining 64 per cent to common equity. However, we should remember this tabulation is a weighted average composite of the privately owned electric utility industry and within this composite are many wide variations of the individual companies in their various components of capitalization.

Since the bonds, debentures, and preferred stock are senior securities with respect to the common stock equity, it follows, therefore, the common stock equity will receive whatever is left after having met the requirements for debt service and preferred stock dividends.

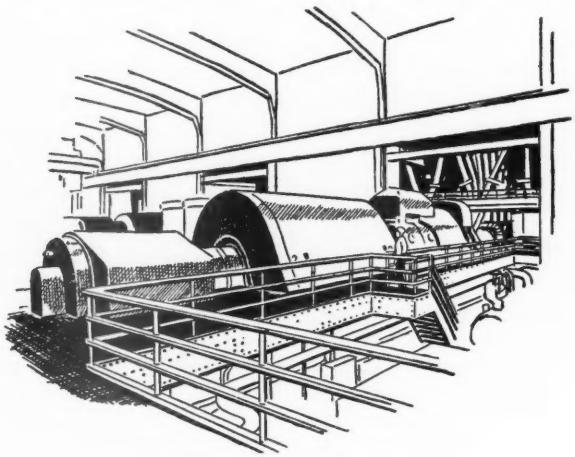
WHEN we consider the over-all rate of return earned by electric utilities on average capitalization was 6.13 per cent in 1955 and that debt and preferred stock, constituting 62.91 per cent of total capitalization, required a composite rate of 3.39 per cent, it is quite evident the rate of return realized by the common equity will vary inversely with the ratio of common equity with respect to total capitalization. Theoretically, at least, the relationship or curve resulting therefrom is a hyperbola in which the rate of return to common equity approaches infinity as the ratio of common equity approaches zero.

Actually, we seldom find an electric utility carrying less than 20 per cent common equity in its capital structure. The continuing studies of the Arizona staff show, however, that between the limits of 20 per cent and 100 per cent common equity, the actual results closely approximate the theoretical curve of the hyperbola. These studies, also, show that while the over-all average rate of return realized by the common equity has varied between rather narrow limits of 10 per cent to 11 per cent during the past ten years at about 37 per cent equity ratio, there are wide variations within the industry ranging from about 5.5 per cent return at 100 per cent common equity to about 15 per cent return with 20 per cent common equity.

So far, we have considered the operating results of only the private electric utilities and the next logical question might be "Well, how about the gas, telephone, and water utilities?" The Arizona staff has made similar studies of these segments of the utility industry and, in general, the same relationship is found to exist. It might be well to mention, however, our studies of the telephone industry have been limited to the 19 principal telephone subsidiaries of the Bell system. However, when we consider the Bell subsidiaries represent about 85 per cent of the telephones in the nation, it is evident we have covered the major portion of the industry.

Of the 19 principal telephone subsidiaries in the Bell system, only one company has any outstanding preferred stock and the weighted average composite of these 19 subsidiaries shows about 74 per cent of their average capitalization consisted of common equity in 1955. This ratio of 74 per cent common equity in the 19 principal telephone subsidiaries of the Bell system is just twice the 37 per cent ratio which we find in the electric utilities. And, conversely, the leverage from debt and preferred stock among the 19 subsidiaries is just one-half of what we find in the electric utilities.

Often commissioners have listened to the plea of telephone companies that the electric utilities earn about 11 per cent on their common equity while the telephone subsidiaries realize about 7 per cent on



The Rate of Return

"FOR the average electric utility, a 6 per cent rate of return on average net investment will provide ample income to cover all debt service charges, pay preferred stock dividends, and give the common equity something like 11 per cent return on its increment of the total capitalization. On the other hand, if this same utility had its rate base set at $15 million on a reproduction cost new less observed depreciation basis with the same 6 per cent rate of return, all of the additional income derived thereby goes to common equity with nothing whatsoever additional to either the bondholders or the owners of preferred stock. The rate of return realized by the common equity might be as much as 20 per cent."

their common equity. What is not so well known, however, is that the leverage from debt and preferred stock of the electric utilities is just double that of the telephone subsidiaries. Now suppose, for a moment at least, that we should agree that a return of 11 per cent on common equity was fair and equitable for the telephone subsidiaries. Since only one of these subsidiaries has any outstanding preferred stock, and the overall percentage is relatively insignificant, we might even disregard this component and, for the sake of illustration, assume the embedded cost of debt capital at 3.23 per cent. With a common equity ratio of 74 per cent, we find the over-all return on capitalization as follows:

26%	Long-term Debt @ 3.23%	0.84%
74%	Common Equity @ 11%	8.14
100%	Total Capitalization @ 8.98%	8.98%

THE foregoing tabulation indicates nearly 9 per cent return on average capitalization which is, substantially, average net investment.

Charts I and II (pages 3 and 7)

indicate the results of the continuing studies made by the Arizona staff on the rate of return to common equity with respect to debt and preferred stock leverage for electric, gas, telephone, and water utilities for the years 1954 and 1955. The leverage of debt and preferred stock is represented inversely, showing common equity as per cent of total capitalization.

It is rather significant to note the wide disparity of earnings on common equity of the water utilities with respect to electric, gas, and telephone utilities. However, when we take into consideration the fact the weighted average composite rate of return realized on average capitalization by the water utilities was 4.73 per cent in 1955, it is evident the rate of return to common equity must be lower than other segments of the utility industry. Another factor which may come as a surprise to some of us is the rate of return realized on common equity by the 19 principal telephone subsidiaries of the Bell system. If we consider the weighted average ratio of common equity for the telephone subsidiaries at 74 per cent, we find they averaged 8 per cent return to common equity in 1955. With the same ratio of common equity, the gas distributing companies averaged 7.1 per cent to common equity, the electric companies had about 7.1 per cent, while the water utilities averaged about 4.9 per cent to common equity.

As a corollary to the above rates of return on common equity, it might be well to mention that the average rate of return on average net investment in 1955 was 6.42 per cent for the 19 principal telephone subsidiaries, 5.88 per cent for electric utilities, and 4.73 per cent for water utilities.

Most of us are now well aware of the precipitous rise in the cost of debt capital which has occurred within the past year. The tightening money market with increased costs of all forms of debt capital is a factor which, undoubtedly, is giving increased concern and apprehension not only to the managements of utilities but, also, to the regulatory agencies whose duty it is to see that rates and charges are just and reasonable while allowing utilities rates of return which will maintain their financial integrity. Whether or not this abrupt rise in the cost of debt capital is a transient condition or is something to remain with us is a situation which only the future will reveal.

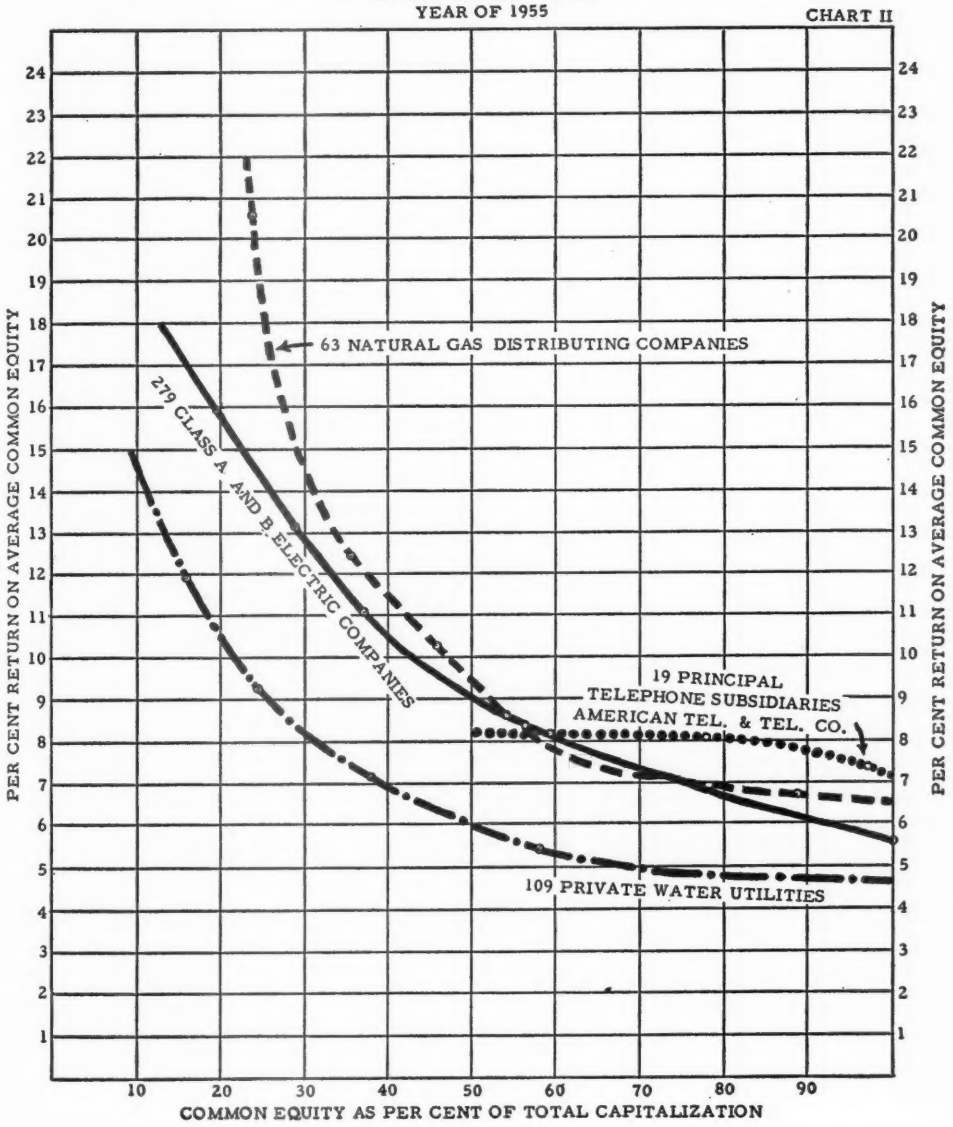
More recently, one of the larger electric utilities on the Pacific coast paid 5.30 per cent on first mortgage bonds rated Baa by Moody's. A well-known telephone subsidiary recently sold debentures rated Aaa by Moody's at a net rate of 4.35 per cent as compared to a net rate of 2.97 per cent some two years earlier for the same general class of securities.

While the increased costs of debt capital may be the basis of asking increased rates of return in some states, we have not as yet had this factor with which to contend in Arizona.

It is fitting and proper we should take notice of the abrupt increase in the cost of debt capital which has occurred within the past year; and, concurrently, it is fitting and proper we should take note of certain ameliorating factors pertaining thereto. First of all, and perhaps of the greatest significance, is the embedded cost of existing debt capital at an average of about 3.13 per cent for electric utilities. Now suppose we wish to increase the

GRAPH SHOWING EFFECT OF DEBT AND PREFERRED STOCK LEVERAGE
ON RATE OF RETURN TO COMMON EQUITY
PRIVATE ELECTRIC, NATURAL GAS, TELEPHONE, AND WATER UTILITIES
IN THE UNITED STATES
YEAR OF 1955

CHART II


63 NATURAL GAS DISTRIBUTING COMPANIES
279 CLASS A AND B ELECTRIC COMPANIES
19 PRINCIPAL TELEPHONE SUBSIDIARIES AMERICAN TEL. & TEL. CO.
109 PRIVATE WATER UTILITIES
PER CENT RETURN ON AVERAGE COMMON EQUITY
PER CENT RETURN ON AVERAGE COMMON EQUITY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
10 20 30 40 50 60 70 80 90
COMMON EQUITY AS PER CENT OF TOTAL CAPITALIZATION

amount of debt securities by 15 per cent over the existing amount and we find this new debt capital is going to cost 5 per cent. The following tabulation will indicate how much we have increased the average cost of debt capital:

100% Old Debt @ 3.13%	3.13%
15% New Debt @ 5.00%	0.75
115% Total Debt @ 3.37%	3.88%

From this simple illustration, it is evident we have increased the average cost of debt capital from 3.13 per cent to 3.37 per cent or 0.24 of a percentage point. In other words, the embedded cost of existing debt capital is acting as a stabilizing factor.

A FURTHER factor, and one which is far from being minor, is the cushion afforded by income taxes, both federal and state. Here in Arizona, we have an incremental corporation income tax rate of 5 per cent which, when coupled with the 52 per cent federal rate, gives us an over-all effective incremental rate of 53.125 per cent for both federal and state tax rates. Since interest on debt is an allowable deduction for income tax purposes, it follows, therefore, that less than 47 per cent of this increased cost of debt capital will be carried down to net income; and the net impact, when carried clear down to net income is, perhaps, not as far-reaching as a superficial inspection might indicate. For example, if we assume the average electric utility is carrying 50 per cent debt capital in its total capitalization and that income taxes offer a cushion of 53 per cent for increased interest charges, the over-all increased cost of debt capital, which we showed as 0.24 per cent above, actually amounts to less than 0.6 per cent in over-all rate of return required to produce just about the same net income.

Fair rate of return and fair return are subjects of widespread discussion and prolonged litigation in our courts. In my mind, one of the most salient statements ever made on this subject came from the late Justice Cardozo of the United States Supreme Court in the case of United States *v.* Chicago, M., St. P. & P. R. Co. (1935) 294 US 499, when he said:

> We must know what a decision means before the duty becomes ours to say whether it is right or wrong.

The philosophy incorporated into this simple, short, and concise statement lends itself well to our concepts of what fair rate of return and a fair return should be. For example, if we have a utility in which the average net investment is say $10 million and the company demonstrates that reproduction cost new less observed depreciation is $15 million, it makes a tremendous difference to the customers and the company whether a regulatory commission is to allow 6 per cent return on a rate base of $10 million or $15 million.

FOR the average electric utility, a 6 per cent rate of return on average net investment will provide ample income to cover all debt service charges, pay preferred stock dividends, and give the common equity something like 11 per cent return on its increment of the total capitalization. On the other hand, if this same utility had its rate base set at $15 million on a reproduction cost new less observed depreciation basis with the same 6 per cent rate of return, all of the additional income derived thereby goes to common equity with nothing whatsoever additional to either the bondholders or the owners of

preferred stock. The rate of return realized by the common equity might be as much as 20 per cent. Since 6 per cent rate of return on a rate base of $15 million is the equivalent of 9 per cent rate of return on a rate base of $10 million, we might use a typical capitalization structure for purposes of illustration as follows:

50.58%	Long-term Debt @ 3.13%	1.58%
12.33%	Preferred Stock @ 4.47%	0.55
37.09%	Common Equity @ 18.52%	6.87
100.00%	Capitalization @ 9.00%	9.00%

Nor is this all of the story. As I pointed out earlier, the average electric utility has nonoperating income, all of which flows to the common equity, averaging about 0.21 per cent of average capitalization. With a ratio of common equity approximating 37 per cent of total capitalization, the nonoperating income provides about 0.57 per cent of additional return to the common equity so that the over-all total closely approaches a return of 20 per cent.

THIS sequel has picked up about where my article left off a year ago. I hope it may have added some new angles for thought and consideration. It presents some of the tests of fair return and fair rate of return as used by the Arizona staff in its continuing studies. Being cognizant of the various schools of thought and the basic concepts pertaining to fair return and fair rate of return, there will, perhaps, never be a reconciliation of minds on this broad subject; but, at least, we can discuss it from time to time.

Social and Financial Responsibility

". . . most of the . . . sweeping changes in the relations between people and their governments during the past generation have been adopted in the name of 'social responsibility.' Governments have been called upon to assume the 'social responsibility' of regulating economic life and protecting or indemnifying individuals against a wide range of hazards. How many of these safeguards properly lie within the field of social rather than individual responsibility is debatable, and whether governmental compulsion is the best means of dealing with them is even more so. What is certain is that the 'social' responsibility cannot be met without a higher sense of financial responsibility than most peoples have shown in the recent past, or are showing today.

"More specifically, uncontrollable budgets, excessive tax burdens, inflationary monetary policies, and currency depreciation make a mockery of any plan for economic security or 'social justice.' Is this financial irresponsibility a passing phase, or is it an inevitable consequence of the attempt by governments, in response to popular demand, to assume a degree of 'social responsibility' beyond their practical capacity to bear?"

—EDITORIAL STATEMENT,
The Guaranty Survey, published by Guaranty Trust Company of New York.

Postdisaster Continuity of Utility Management

This article discusses the plans that can be made for the postdisaster continuity of public utility operations. The protection and assembly of management, the re-establishment of lines of authority and operating supervision are considered in a practical and objective way.

By RALPH V. H. WOOD*

The Communist Threat

THE Communist threat continues to assume a more insidious but dangerous form every day.

While retaining and extending their capacity to commit armed aggression, the Communists are for the present relying on a wide range of more subtle tactics, both political and economic, to achieve their ends.

There is little reason to conclude that the basic features of the Soviet system are being changed.

It remains a dictatorship based on an ideology hostile to the United States and to democratic methods. It has shown no intention of abandoning methods of force and subversion to attain its ends.

In the four years since Stalin's death, it has shown new flexibility and range in its methods and areas of operation. It continues to press for the development of heavy industry, for economic power rather than popular welfare.

The danger of overt aggression is less apparent, but we cannot assume that the Communists have finally renounced force. The brutal Soviet repression of the Hun-

* Director, defense department, Philadelphia Electric Company. For additional personal note, see "Pages with the Editors."

garian uprising is eloquent testimony of that fact.

Nor must it be forgotten that the Chinese Communist government has given the Soviet Union wholehearted and unqualified support of its use of force.

The action in Hungary to maintain its central domination of the policies of the countries of the Communist bloc, demonstrated this support.

THE Communist bloc has built up a huge military machine. Admiral Radford recently said: "From the military viewpoint the really spectacular aspect of Communist strength is its combination of a vast land area, a huge supply of people, and very large armed forces."

The Soviets have a large air force with modern planes. They have 6.5 million men in their ground forces. They are building up-to-date, long-range submarines. They are hard at work on guided missiles. We must assume that they have a considerable stockpile of nuclear weapons.

The Chinese Communists are busy developing their military strength and efficiency, particularly in border areas and the area facing Taiwan.

The main effort of the Communists to subvert the peoples of countries consists in the infiltration of political, youth, and cultural movements and trade unions.

At the same time the Communists have directed their political activity towards two objectives:

Where the Communist party is illegal, they have aimed at legalization of the party so that they may re-enter national political life.

In those countries where the party is legal, they have tried to promote the formation of coalition or interparty alliances of united front elements with a view to gaining control of governments.

They continue also to make use of "front" organizations, which mask their Communist character and aims behind a façade of ostensibly respectable organizational names and purposes.

Every effort is made to entice well-known non-Communists into membership of these groups to lend an air of respectability to such groups.

OTHER important targets of Communist subversive efforts during the past year were the minority groups, in particular the overseas Chinese communities.

During the past year Communist countries have continued and intensified their "economic offensive." Remember that it is difficult for men with empty stomachs to know right from wrong.

Aid agreements with the Communist countries have the added danger that they often permit the entry into the country accepting aid of "experts" whose presence opens up new channels for espionage and subversion.

There is a danger that dependence on Communist production and technical capacity may become permanent, giving the Communists a much-desired political lever.

Such then is the nature of the Communist threat—an integrated subversive attack in all fields of national life to undermine the stability of free nations and thus prepare them for Communist domination.

Behind this campaign of subversion stand Communist armed forces. These have been steadily increased and are so disposed as to be ready for use at a moment's notice should armed aggression once again better suit Communist aims.

Rôle of Management

WE can define management in the way the little girl defined salt. She said that salt is the thing that makes potatoes taste so bad, when you leave it out.

The over-all management group is a very large body of men and women who come from all strata of society. They may or may not be rich, may not belong to the same church or the same social or political classification, nor have educational ties.

It is this body that is responsible for the progress and direction of all industrial organizations, and the many millions of people who may or may not work in them.

The Problem

COURAGE and candor are rare and precious qualities needed in pioneering to develop an idea.

These are needed to promote an attitude of mind receptive to proposals for the undertaking of a project for which society may not yet be fully prepared. This project requires the support particularly of those with imagination and an aggressive spirit.

The attitude of any individual causes him to reject certain philosophies and accept others. It is fundamental, therefore, that in order to get full co-operation, there must be a receptive attitude.

One of the difficulties of such programs is that American industry just cannot run at half speed. Given an all-out war to produce for, American industry digs in and goes "all-out." When the assignment calls for being prepared, but without moving too fast, the production machine develops bugs.

The way to find out is to try, and that does not come from sitting on one's hands! Make a start to study the problem of how to continue corporate existence. The plan will evolve toward the eventual participation of everyone, although only a cadre is developed in the initial stage. We progress with innovation, but adjustment to this new idea cannot proceed leisurely. Time may be running out!

You have to solve your own problems of continuity of management. No one can be more interested in, or know more about, your enterprise than you. Certainly you do not turn to Uncle Sam for an easy solution. You have to solve this one yourself!

Why Be Concerned?

THE well-managed company, which is well regarded by investors, cannot af-

¶ "IN *developing a plan to minimize the effects of a disaster caused by the forces of nature, or man-caused destruction, a study should be made to determine the probabilities and to establish the method of coping with catastrophes. It is not feasible to analyze all the many variations and possibilities. The main objective for effective effort, however, is to insure that every employee knows what to expect and what specific action he, as an individual, should take. All plans must be periodically tested to see that they are operable.*"

ford to neglect consideration of continuity of management. This is no time to gamble, but too much caution could be costly.

Too often, I believe, this subject of continuity is regarded as either mysterious or impersonal. Because the need for management has been around for a long time it sometimes suffers the rôle common to an old landmark. Until someone stubs his toe on it, it is apt to remain unnoticed. Cessation of management falls into the same category.

Investors are mostly interested in buying future earnings. A physical catastrophe caused by a severe storm or plant failure can be extremely serious to a small company. We well remember Worcester, Massachusetts, the Amboys, and Texas City. Finally, we must always consider a Hiroshima or Nagasaki.

We go a step further and evaluate a catastrophe that has a delayed action or accumulative effect on your company, caused by a happenstance that may be at some physical distance.

You may carefully see the advantage of dependence on one industry or one company as a supplier or as a customer. We know it can be volatile through the risk of terminated contracts, even though your plant is still in business.

Multiple sources of supply have certain advantages. We have learned that a single A bomb has the power to wipe out an entire source of supply, if that source be a single plant. Thought must be given to one or more alternate suppliers.

What Is the Usual Program?

HAVE you considered a production pool of a group of small suppliers? Companies work together to produce and assemble the various parts of a given item, even though no one company could do the entire job.

We remember that a major fire burned out a large industrial plant, reducing machines to rubble, at the General Motors transmission plant.

Industry has to be independent yet dependent, co-operative yet competitive. Communications between each to tell "how" and "with what."

Our companies are expected to be dependable, to have adequate facilities, to foresee the future by adding new facilities when needed.

New plants are located in areas away from known or potential hazards or targets. The risk is spread in much the same way by not having all officials of a company travel on the same plane.

We attend fire schools to be trained in the latest techniques in extinguishing difficult fires.

We review the newest National Safety Council's yearbook, *Outstanding Facts,* to provide the factual background necessary to give direction to an industrial safety program.

What Else Is Being Done?

INSURANCE costs money. However, we pay the premium with the definite knowledge that insurance takes out some of the physical risks or hazards of a business.

Similarly, any steps that we take to provide continuity of management will probably require spending some money either directly or in ways that cannot be specifically earmarked. This is just as much insurance as any other risk-assuming policy.

For example, an atomproof vault, with 7,300 square feet of floor space, has been

Continuity of Operation

"AMERICA'S industrial plants are a vital part of the nation's resources. They are vulnerable to disaster because they are in the main unprotected. . . . Our ability to continue our American way of life rests largely on our industrial plants and their skilled workers. The production capacity and morale of these workers depend to a great extent on their safety and the safety of their families. To keep production going and to save life and property, industry must organize for continuity of management. The best way to cope with disaster is to be thoroughly prepared to meet it. Steps taken now will minimize the effects of any major catastrophe."

built by du Pont beneath one of its buildings at Newark, Delaware, to protect records.

We cannot all use one million pounds of dynamite to hollow out a mountain, outside a large city, as an alternate communication center. This the federal government has done near Washington, D. C., in case present Army, Navy, and Air Force facilities are knocked out by enemy attack.

We can, however, plan alternate means of communication that do not rely solely on our present headquarters and its telephones. It might not be there!

On the other hand, we do not all rush out to buy portable generators after a hurricane. One thing we know, they must be tested weekly to be in proper working shape for an emergency. These *are* calculated risks!

Nor can we all build a fortress-like headquarters five miles from downtown Washington, as has recently been completed for the Armed Forces Institute of Pathology. The "atomic bomb resistant"

structure of reinforced concrete has three underground floors, and its own water and power supply.

Mutual Aid

THEN there is a problem for the integrated area: mutual aid, or the collective judgment of a group of similar or related industries.

An effective mutual aid program is the Bridesburg area fire chief's mutual assistance group. At its meetings the members become acquainted not only with the fire chiefs in the area, but with safety, city fire, and police officials. In an emergency they have called on members of their group for help; several times at the Barrett Company, Rohm & Haas, and the Frankford Arsenal.

Another example close to home, of mutual aid in action, was the reconstruction of the Connelly Container Corporation after it was burned out. Four nationally known manufacturers of container products offered assistance and by the day following the fire, Connelly had offices functioning for engineering, production, sales, personnel, and reconstruction staffs.

Preplanning that is effective was demonstrated by the electric power industry's emergency assistance roster after Hurricane Hazel. The power companies were prepared to send to each other trained and skilled emergency crews, and necessary equipment and materials to assist in restoration of service. When the power lines went down under the impact of crashing trees, out of the area and even out of the state, teams of linemen came to the rescue and service was restored.

Advanced planning has secured engineering services and shop specialists to repair salvagable equipment in record time. This emergency service has assured some companies that they will receive the right equipment properly applied and installed on schedule.

Your Specific Plan

IN attempting to spell out in some detail a sequence of events that could serve as a guide, it is, of course, recognized that requirements of all companies are not the same. You will have to determine how extensive your program should be.

In developing a plan to minimize the effects of a disaster caused by the forces of nature, or man-caused destruction, a study should be made to determine the probabilities and to establish the method of coping with catastrophes.

It is not feasible to analyze all the many variations and possibilities. The main objective for effective effort, however, is to insure that every employee knows what to expect and what specific action he, as an individual, should take. All plans must be periodically tested to see that they are operable.

What Is Needed for a Rendezvous Point

IN the event of a major disaster it is possible that the headquarters building of a company might suffer considerable damage. In order to prepare for such a catastrophe, companies should designate a reorganization point to which members of the management group will assemble. This preselected rendezvous should be located well beyond any projected damage area. This could be company property normally used for other purposes, such as a sales office.

The point selected for this mission should be readily accessible, possess suit-

able space for living accommodations, and be within a reasonably short distance of the vaults where the microfilm and other records are kept. More about this later.

Consideration must be given to personal requirements for food, clothing, and shelter for several days' duration; marshal law or other restriction might prevent freedom of movement.

An overhead group to man this management headquarters is essential. This group needs to be under competent direction. It will include supervisors, clerks, stenographers, typists, and messengers. Working equipment should be obtained on a loan basis from nearby company facilities, or procured locally.

Essential requirements are typewriters, calculating machines, adding machines, hand-operated mimeograph, file equipment, punches, staplers, and sundry office supplies, including a stock of printed forms.

Necessary telephone lines should be available in advance. Where the activity covers numerous locations, short-wave radio receivers and transmitters may be desirable. These may be leased. Communication teams need to be organized to operate the equipment as part of the overhead group.

Portable generators for emergency light and power to operate the radios will increase the reliability of the headquarters.

What Else Can Be Done?

In large companies with complex organizations it may be desirable to establish alternate headquarters at remote locations for other functions, in addition to that for the management team.

For example, the engineering department emergency headquarters would have complete sets of maps, drawings, or blueprints of all properties; lists of tools, spare parts, and material items. Complete lists of departmental employees, with home addresses, telephone numbers, range of skills, and availability of automobiles should be there, together with lists of contractors and suppliers. Key engineering personnel should be preassigned to report there.

These mobilization centers may not necessarily be operating centers to be permanently manned. The damage must first be assessed before personnel can be adequately assigned to proper locations. The initial mobilization of key personnel enables management to start essential operations for restoration, to know where key personnel are located and to re-establish communications.

¶ "Preplanning *that is effective was demonstrated by the electric power industry's emergency assistance roster after Hurricane Hazel. The power companies were prepared to send to each other trained and skilled emergency crews, and necessary equipment and materials to assist in restoration of service. When the power lines went down under the impact of crashing trees, out of the area and even out of the state, teams of linemen came to the rescue and service was restored.*"

A further consideration for large companies is a plan for decentralization of transportation, tools, equipment, and spare parts.

Safeguarding of Records

We think of the strongbox as a beginning in safeguarding records. Its weakness of course is that it is located at the scene of the disaster. A forward step is to rent a safe-deposit box in a bank.

A more advanced step is to make duplicate copies of important papers, such as minute books, customer and general ledgers, blueprints and specifications, and to store these at alternate locations.

A still further refinement is microfilming and storing the microfilms in a remote bank or other safe vault.

Viewers and duplicating equipment to blow up the microprints on paper, to a size that is usable in the field, should be secured, because of possible difficulty to obtain at the time of an emergency.

Other records considered essential will be stored in the vaults with the microfilm. These records need to be kept current and provide the means for picking up and carrying on the business and affairs of the company in the event that records in the normal headquarters building are not available.

Postdisaster Steps

Immediately upon learning of a disaster in the area of a company facility, the president and other company officers will immediately try to reach the normal company headquarters. Upon learning that this has become inoperable, they will proceed by the fastest available transportation to the predesignated rendezvous.

The president, or in his absence the available senior officer, acting as president, will be responsible for picking up and carrying on the business and affairs of the company:

a. Request all surviving board members to proceed immediately to the reorganization point. (Address and phone numbers listed in the vaults.)

b. Advise the board members of their authority to fill vacancies, even though a quorum is not present. (Copy of bylaws in vault.)

c. Reorganize the company as necessitated by nonavailability of some officers or managers. (A reorganization chart which indicates successors to present officials should be kept confidentially in the vault for guidance.)

d. Advise all remaining company facilities of temporary change in company headquarters.

e. Arrange to meet payrolls and for other cash needs.

The accounting department would plan to maintain a temporary bookkeeping system by hand posting; checks would be typewritten. All other functions would be on an emergency basis to eliminate the need for procuring cumbersome office machinery which probably would not be available.

Getting Back into Production

Now, to get back into production requires further preplanning—before the smoke has cleared, the water has gone down, or the hurricane subsided. And what about industrial plants damaged by enemy attack? Where will you start; what will you do first? These answers are found in the things you do now.

Alternate Means of Communication

"INSURANCE *costs money. However, we pay the premium with the definite knowledge that insurance takes out some of the physical risks or hazards of a business. Similarly, any steps that we take to provide continuity of management will probably require spending some money either directly or in ways that cannot be specifically earmarked. This is just as much insurance as any other risk-assuming policy. For example, an atom-proof vault, with 7,300 square feet of floor space, has been built by du Pont beneath one of its buildings at Newark, Delaware, to protect records. We cannot all use one million pounds of dynamite to hollow out a mountain, outside a large city, as an alternate communication center. . . . We can, however, plan alternate means of communication that do not rely solely on our present headquarters and its telephones. It might not be there!*"

You must have hand tools, instruments, machine tools, utilities, materials, supplies, and personnel, plus shelter. Decide now which is most essential to continued production. Of these which is most vulnerable, most easily damaged, and where do you get replacements. This requires co-ordination within the plant, with similar plants in the area, and with local civil defense officials.

If your local CD needs to be strengthened, lend your support by actually joining and lending a hand in directing its activities so that civil defense can be more effective.

Here again your intimate knowledge of industrial requirements will prove a valuable asset.

IN this manner not only your own plant, but your entire industrial area may be organized now for a rapid recovery.

You know where all the essentials are, from whom you can expect help, areas needing the most attention. You have found nearby buildings where temporary production lines may be set up, and supply sources for recuperation.

You have a plan for salvage and repair, drawings and records microfilmed and stored in safety, employees cross classified for alternate occupational specialties. In addition, materials are marked and stored for ready recognition and a master plant layout to scale has been completed.

If you are spared total destruction, recovery will be feasible. The first step is a complete survey of the damage, for structural weakness, damaged utilities, and other hazards. These conditions must be corrected first and danger areas roped off.

Debris removal is started, heavy machinery replaced or disassembled, and roofs supported for safety. Building openings should be closed temporarily with whatever means are available, to keep out the weather. Meanwhile crews are assigned to restore power, gas, water, and heat.

Finally, attempt is made to get as much of the equipment workable as quickly as possible.

In the meantime personnel reorganization is taking place. People are assigned where needed most, casualties are replaced, and as fast as a section is completed it is operational.

In the event of a catastrophe, dependence should not be placed on the normal community protective services because they would probably have more calls than they could handle.

These are only some ways and means of attacking the problem. Nothing is really ever finally solved.

In Conclusion

America's industrial plants are a vital part of the nation's resources. They are vulnerable to disaster because they are in the main unprotected.

Wars are fought, not for control of the seas or control of the air. These are but intermediate steps toward attainment of the final objective. That final objective is control of land and of the people living on it.

Control of essential land areas is vitally necessary to the effective exercise of sea and air power, since sea power is dependent upon the continued use of land bases, and air forces upon the continued availability of landing fields.

The more land an aggressor force controls, the more sea, air, and land power it can sustain. With the land comes the food for the armed force, the steel and coal to forge its weapons, the oil to power its engines of war, the industrial capacity to enlarge its war-making potential, the man power to labor for its exploitation.

Our ability to continue our American way of life rests largely on our industrial plants and their skilled workers. The production capacity and morale of these workers depend to a great extent on their safety and the safety of their families.

To keep production going and to save life and property, industry must organize for continuity of management. The best way to cope with disaster is to be thoroughly prepared to meet it. Steps taken now will minimize the effects of any major catastrophe.

The Taxpayer Subsidizes Government Power Projects

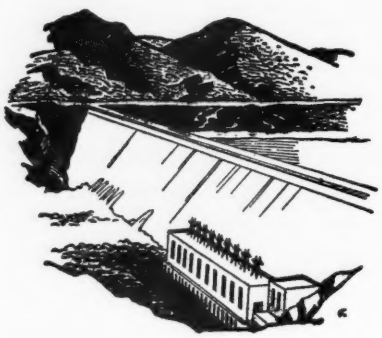
Is TVA a "bankable" proposition? Is it paying its way, and, if not, to what extent is it subsidized? This sort of article has been done often before, but this author takes an original slant and also answers some of the claims made as to the tremendous economic benefits of government power projects.

By ERNEST R. ABRAMS*

Almost without exception, all publicly owned electric power projects in the United States from small municipal distribution systems to far-flung federal developments are supported to a greater or lesser extent by the subsidies granted, with or without their consent or knowledge, by taxpayers. In the case of municipal systems, which finance construction or purchase of their electric facilities through the sale of bonds, subsidies are provided largely by local benefited taxpayers and the extent of their contributions constitutes only a minor portion of over-all costs. But federal power projects receive funds for their construction through the appropriation by Congress of funds exacted from every taxpayer in the nation, whether or not they are served by the project, and some of these projects pay token interest.

Bonneville Power Administration, for example, "sets aside" interest at the rate of 2½ per cent on that portion of the federal investment in its facilities allocated to power, while Southeastern Power Administration turns its gross income over to the U. S. Treasury, which assigns a part of it to interest. But the Tennessee Valley Authority pays no interest whatever on the vast sums given it by Congress, except for a relatively minor appropriation on which interest was required. Since

*Writer of business articles, resident in New York, New York. For additional personal note, see "Pages with the Editors."



this interest-bearing appropriation has been reduced over the years by crediting TVA payment of excess earnings to its retirement, TVA's total interest payment to the Treasury was $41,843 in the 1956 fiscal year on a total investment in its power facilities by the federal government of $1,219.5 million.

SINCE TVA is the most publicized of federal projects, since it is engaged in a variety of activities, including flood control and navigation improvement (the constitutional pegs on which most federal power projects hang), since it engages in considerable publicity to attract outside industries to its service area, and since its public records are more complete than those of other federal projects, it will be compared herein with the investor-owned electric utilities of the country to determine the extent of the subsidies it receives from the nation's taxpayers.

In its first annual report (that for the fiscal year ended June 30, 1934), TVA stated its most immediate purposes were "to maintain and operate the Wilson dam and power plant, to administer the fertilizer plants at Muscle Shoals, and to build the Cove Creek (Norris) dam on the Clinch river." Then, after reciting its more general and altruistic purposes, it stated: "The methods provided by the act for bringing about these results are the maximum development of the Tennessee river for navigation purposes, flood control, and generation of electric power incidental to and consistent with flood control and navigation (and) the disposal of the surplus power thus produced . . . "

SHORTLY after the creation of TVA in July, 1933, David E. Lilienthal, one of its directors and then general counsel, made a series of talks on the proposed accounting and operating plans of the authority, which are of great present interest in disclosing the wide spread between promise and performance. Speaking before the Rotary Club of Chattanooga on September 28, 1933, he said, in part: "The Tennessee Valley Authority is not to be a taxpayers' subsidy. It is a business undertaking."

Again, before the Rotary Club of Memphis on October 17, 1933, he said: "Suffice it to say that a careful effort was made to consider all items of expense of comparable private operations (in fixing TVA's electric rates) and to treat the entire project as a self-supporting project and not as a taxpayers' subsidy." Further along in the same speech, he stated: "The authority has no obligation to pay interest, since it has not issued any bonds." But later in the same address, he forgot his earlier statement and said: "In short, the power program of the authority is not to be subsidized by the taxpayers. And in the second place, to carry out the President's plan for a 'yardstick,' all costs of a comparable privately owned company were considered as accurately as possible. These include direct operating expenses and administrative overheads, *interest,* depreciation, and taxes." Emphasis supplied.

STILL again, in a speech at Knoxville, published in the *Chattanooga News* of March 1, 1935, he said: " . . . But there seems to be some inclination to forget that these dams are not being built for scenic effect. These millions of dollars are not being spent merely to increase business activity in this area. These are power

dams. They are being built because they will produce electric power." Not navigation and flood-control dams with incidental power, but power dams with incidental navigation and flood-control benefits.

Finally, speaking at Louisville on November 26, 1935, Mr. Lilienthal said, in part: "The production of power by these navigation and flood-control dams furnish (sic) the answer, in part, to the question: 'How is this vast project to be paid for?' By selling the power, the federal government will receive a cash return which will not only make the electricity program self-supporting, but in the course of years will repay the investment in navigation and flood-control works."

One thing more. TVA's statement in the morning newspapers of September 15, 1933, stated, in part: "The wholesale rates which the authority announced yesterday, while strikingly low, cover all costs of furnishing service, and are based on the board's policy that Muscle Shoals shall be entirely self-supporting and 'bankable'; in other words, a business enterprise."

IN general, then, these are the promises TVA made to the taxpayers of the nation. The authority was to be entirely self-supporting and not a taxpayers' subsidy. And, second, its rates were to be adequate to cover all operating and administrative expenses, including interest on the public funds invested in its power facilities and taxes. Suppose we see to what extent these promises have been kept. Although TVA has enjoyed at least fifteen different forms of handouts in the past twenty-three full years of operation, some of them are relatively unimportant and only two of them will be discussed herein. These are its failure to pay federal taxes and its failure to pay interest on the funds of the taxpayers invested in its power facilities.

To gain a quick insight into the extent of just these two subsidies, significant data from the EEI preliminary estimate of all investor-owned electric utilities for the 1956 calendar year and from TVA's annual report for the 1956 fiscal year are presented in Table I. It will be noted that where the investor-owned utilities paid

TABLE I

SELECTED OPERATING DATA OF ALL INVESTOR-OWNED ELECTRIC UTILITIES FOR THE 1956 CALENDAR YEAR AND OF TVA FOR THE 1956 FISCAL YEAR IN MILLIONS OF DOLLARS

	Investor-owned		*TVA*	
Operating Revenues	$7,522	100.0%	$221.6	100.0%
State and Local Taxes	687	9.1	4.1	1.9
Federal Taxes	1,074	14.3	0	0
Total Taxes	1,761	23.4	4.1	1.9
Interest	488	6.5	0.004	—
Preferred and Common Dividends	1,023	13.6	0.0	—
Total Wages of Capital	1,511	20.1	0.004	—
Net Income from Power	1,342	17.2	53.8	24.2
Losses from Other Activities	0	0	7.3	3.3
Interest Unpaid to U. S.	0	0	45.6	20.5
True Net Income	1,342	17.2	0.9	0.04

$687 million or 9.1 per cent of operating revenues in state and local taxes, and $1,074 million or 14.3 per cent of operating revenues in federal taxes, TVA paid a mere $4.1 million or 1.9 per cent of operating to municipalities in lieu of taxes and not a dime in federal taxes. Likewise, where the investor-owned companies paid $488 million in interest and $1,023 million in dividends, or a total of $1,511 million, or 20.1 per cent of operating revenues in wages of the capital invested in their physical property, TVA paid only $41,843 in capital hire, a mere fraction of one per cent of its operating revenues.

HAVING succeeded by 1939 in driving private enterprise from the area, TVA assumed responsibility for the electric power supply of the Tennessee river valley and immediately began forgetting about power as a by-product of flood control and navigation improvement. Where its total investment on June 30, 1939, was $253.7 million, of which $148.7 million or 58.6 per cent was allocated to power, it had grown to $2,095.8 million by June 30, 1956, of which $1,710.4 million or 81.6 per cent was credited to power. Moreover, where TVA's electric-generating capacity on June 30, 1938, totaled 450,879 kilowatts, of which 65,279 kilowatts or 14.9 per cent were in fuel-burning plants (acquired through the purchase of privately owned power companies), its total generating capacity on June 30, 1956, was 8,444,750 kilowatts, of which 5,702,250 kilowatts or 67.5 per cent were in thermal plants. It is difficult to understand how electric energy generated in fuel-burning plants can be considered incidental to, or a by-product of, flood control and navigation improvement. Furthermore, by the close of the 1956 fiscal year, TVA's service area had been extended to cover the whole of Tennessee and portions of six other states, containing some 80,000 square miles and approximately half of which lies outside the Tennessee river valley.

UNDER the provisions of the TVA Act, the authority was given, without cost, the two nitrate plants and steam-electric generating plant, and Wilson dam and hydroelectric plant, all at Muscle Shoals, when the act received presidential approval on May 18, 1933, while $50 million of working capital was given to it by Congress on July 6th of that year. In addition, during the fiscal years 1934-56, TVA received appropriations from Congress of $1,932,268,000, of which $1,219,499,468 or 63.1 per cent was allocated to power. Including gifts of property from other federal agencies, TVA's power investment stood at $1,588,464,205 at the close of the 1956 fiscal year.

During the twenty-three years of TVA power operations, ending with the fiscal year 1956, net profits from power have totaled $355,286,000, while combined net losses from navigation, flood control, manufacture of chemicals and munitions, and all other operations have totaled $166,149,000, leaving a consolidated net profit, before interest on the taxpayers' investment, of $189,137,000. Using the average rate of interest paid by the U. S. Treasury on long-term bonds sold by the federal government during these twenty-three years, the outlays of the Treasury for hire of the borrowed funds invested in TVA's facilities totaled $358,963,000. If TVA had paid that amount in interest to the federal government on funds of the tax-

TABLE II

PERCENTAGE INCREASES OF ECONOMIC ACTIVITIES IN TENNESSEE AND 10 OTHER SOUTHEASTERN STATES IN VARIOUS PERIODS

	Tennessee % Increase	*10 Other States % Increase*
Population:		
1930-1956	32	35
1940-1956	19	18
Personal Income Per Capita:		
1933-1955	516	521
1940-1955	271	272
Total Personal Income:		
1933-1955	666	729
1940-1955	331	373
Small Light & Power Kwh Sales:		
1933-1955	861	1,137
1940-1955	323	444
Small Light & Power Customers:		
1933-1955	105	175
1940-1955	69	100
Total Bank Deposits:		
1933-1955	1,470	1,877
1940-1955	361	401
Cash Receipts from Farm Marketing:		
1933-1955	417	498
1940-1955	251	337
Employment in Manufacturing:		
1935-1955	137	115
1940-1955	92	79
Gross Postal Receipts:		
1933-1954	362	397
1940-1954	226	238

Sources: U. S. Department of Commerce—Bureau of Census and Survey of Current Business; Statistical Abstract of the United States; Dun's Statistical Review; Edison Electric Institute Statistical Bulletins.

payers invested in its facilities, it would have shown an aggregate loss of $169 million from all operations during the past twenty-three years. But since it did not, the American public had to put up the money in its tax payments. This payment represents a part of the taxpayers' subsidy of TVA. Moreover, this condition is being constantly aggravated by the efforts of the Tennessee Industrial & Agricultural Commission, a state agency, the Electric Power Board of Chattanooga,

a city agency, and Citizens of TVA, a volunteer agency in which the governor of Tennessee is active, to attract industries to the TVA area by advertisements and propaganda, calling attention to the low taxpayer-subsidized electric rates in the valley.

DURING the 1956 calendar year, the investor-owned electric utilities of the country paid an aggregate of $687 million in taxes to state and local governments, or 9.1 per cent of their combined operating revenues. During the 1956 fiscal year, TVA paid $4.1 million or 1.9 per cent of its operating revenues in lieu of taxes to those municipalities buying their power supplies from it at wholesale, which was equivalent to 5 per cent of the revenues received from them. But it made no payments in lieu of taxes to the seven states in which it operates.

If TVA had paid state and local taxes at the same ratio as the privately owned electric utilities, its outlay would have been raised about fivefold to $20.2 million. By failing to match the investor-owned companies in state and local tax payments, the taxes of all forms of private enterprise and property ownership were increased, but this was justified by TVA on the unsound theory that the great increase in economic activity in the Tennessee river valley occasioned by TVA's "cheap" power would enable state and local governments to increase their tax collections from private enterprise and property owners.

In addition, the investor-owned electric utilities of the land paid an aggregate of $1,074 million or 14.3 per cent of their combined operating revenues to the federal government in taxes during the 1956 calendar year. If TVA had paid federal income taxes at the rate of 52 per cent on the $46.5 million of net income before interest on taxpayers' funds invested in its power facilities, which it did not, its federal tax bill would have been nearly $24.2 million. Even if it had paid this interest to the Treasury and its net income had been reduced to $924,610, it still would have had a sizable federal tax bill.

COMBINING the subsidy it received from state and local governments of $16.1 million in insufficient taxes with $24.2 million in unpaid federal taxes and adding on the $45.6 million of unpaid interest on the taxpayers' capital it employed, the total taxpayers' subsidy of TVA's power operations was $85.7 million in the 1956 fiscal year alone. This indicates the extent to which TVA is a taxpayers' subsidy, the variety of business enterprises it has turned out to be, and just how "bankable" an undertaking it is.

In his article in PUBLIC UTILITIES FORTNIGHTLY of March 28, 1957,[1] Dr. John Bauer dwelt at length in glowing terms on the tremendous economic benefits government power projects bestowed on the areas within transmission distance, but things do not seem to have worked out that way in the Tennessee river valley. The 11 states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia have been assumed to be the southeastern states of the country. Arkansas has been included because of its proximity to Tennessee and because TVA power has been transmitted

[1] "Results of Low-cost Federal Financing of Hydro Projects," by John Bauer, PUBLIC UTILITIES FORTNIGHTLY, March 28, 1957, Vol. 59, No. 7, p. 449.

to it. Since TVA assumed responsibility for the electric power supply of Tennessee in 1939, 1933-56 and 1939-56 are the base periods to be used in the comparison of increase in Tennessee with the other 10 southeastern states, although slightly different periods may be substituted of necessity.

PRIMARILY from the data presented in Table II, but also from other sources, it appears Tennessee ranked as follows in phases of the economy of the Southeast:

Population: fourth in 1930 and fifth in 1956.

Personal Income Per Capita: sixth-seventh in 1933 and fifth in 1956.

Total Personal Income: fourth in 1933 and fifth in 1955.

Small Light and Power Kilowatt-hour Sales: fourth in 1933 and fifth in 1955.

Small Light and Power Customers: fourth in 1933 and sixth in 1955.

Business Firms in Operation: fifth in both 1944 and 1954.

New Business Incorporations: fifth in 1946 and sixth in 1956.

Total Bank Deposits: second in 1933 and third in 1955.

Cash Receipts from Farm Marketing: fifth in 1933 and ninth in 1955.

Employment in Manufacturing: fourth in 1935 and third in 1955.

Gross Postal Receipts: third in 1933 and fourth in 1954.

Construction Contracts Awarded: first in 1933 and fifth in 1955.

Per Cent of Personal Income Tax Paid: sixth in 1933 and fifth in 1955.

When it is realized that the federal government has poured more than $12 billion into Tennessee between 1933 and 1956 for the creation of TVA and the Atomic Energy Commission, this is hardly an economic growth to warrant enthusiasm.

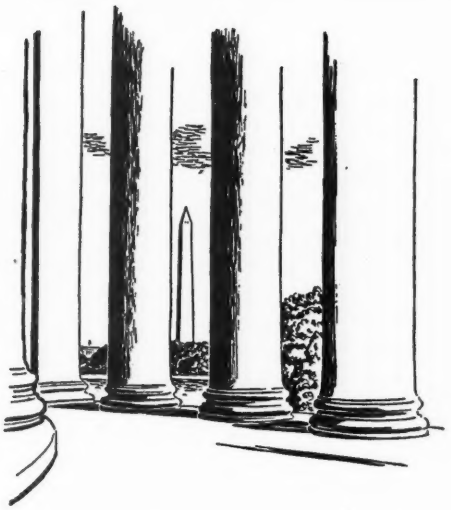
Utility Company Pays Taxes for Entire Township

IF there is a heaven on earth for the poor, struggling taxpayer, Holland township, New Jersey, on the Delaware river is a tax paradise where every day that the sun rises, $1,000 pours into the municipal treasury—enough to give every inhabitant $250 a year. And not one cent comes from residents of this Hunterdon county farm land. In fact, Holland township is so rich it levies a tiny tax just to keep the inhabitants in practice and justify the tax collector's job.

When the township's council met at a recent budget hearing, there was reported a surplus of more than $1 million. All this comes from the little-known state gross receipts tax levied on the township's richest native—the giant Holland generating station of the New Jersey Power & Light Company. Last year alone the tax brought in $377,054 for the township's 1,500 residents.

There are no gold rush spending splurges here, however. Residents prefer to let the money go to their pocketbooks rather than their heads. So the council spends it on new roads—$142,280 worth in the last three years—or schools. Some $187,500 will be turned over this year to the board of education, saving it the trouble of raising its own funds. Last year the school board voted a substantial building addition and the town council picked up the tab without batting an eye.

Washington and the Utilities



Gas Bill Chances Improved Somewhat

A FAST triple play, Eisenhower to Harris to Rayburn, is responsible for the somewhat improved chances of the bill to ease the burden of Federal Power Commission regulation on natural gas producers. The outlook is still for a close contest in the House and no action at all in the Senate this year on the Harris-O'Hara Bill.

But the President has removed the main roadblock to the bill in the House Interstate Commerce Committee by writing a letter to its chairman, Representative Harris (Democrat, Arkansas), coauthor of the bill. President Eisenhower indicated that it is more important that Congress pass a bill along this line than it is to include two restrictive amendments which have made Congressmen from the producer states gag.

Harris construed the President's letter as an indication that the President would sign a bill with or without the controversial amendments suggested by an administration spokesman at the outset of hearings on the Harris-O'Hara Bill. House Speaker Rayburn, whose support is essential if the bill is to get anywhere in the House, has reportedly expressed satisfaction with the President's new position. This should insure that the bill will at least reach the House floor this year.

THE White House concessions, though helpful, by no means assure passage of the bill. The furor raised during hearings on the bill over the two administration-supported amendments is likely to be renewed when the bill comes up for House debate. One of the controversial amendments—that which would permit the FPC to consider cost in its determination of a reasonable market price for gas—may have to be included to win necessary support in a vote which is certain to be close.

There is evidence that the producers would be willing to accept this amendment provided the bill spells out safeguards to prevent a future FPC from applying it on a utility basis to all producer cases. (The other amendment applies to FPC jurisdiction over escalator clauses in existing contracts.) Both the administration and FPC Chairman Kuykendall want the FPC to have the power to employ a general over-all cost appraisal—one available to producers who want to show how

their costs of doing business have gone up.

Chairman Kuykendall may find that his liberal attitude on the gas bill will stand him in good stead if the government power bloc follows through with its threat to make a fight on confirmation of Kuykendall for another full term on the FPC. Because of Kuykendall's concurrency with the Hell's Canyon hydro plant licenses for the Idaho Power Company, the government ownership bloc has been sniping at him. Senator Clark (Democrat, Pennsylvania) and other Senators, Morse and Neuberger of Oregon and Kefauver of Tennessee, have been beating the tom-toms about the so-called Idaho Power Company "tax amortization scandal."

But Clark made the tactical error of broadening his attack on Kuykendall to include criticism of the FPC chairman's sympathy for the Harris-O'Hara Bill. This will naturally put the gas producer state Senators, including Senate Majority Leader Lyndon Johnson (Democrat, Texas), on the spot if they join any fight on Kuykendall's nomination. And so, although the government power bloc would like to seize the opportunity of getting some more publicity mileage for its Hell's Canyon bill (at the expense of Kuykendall's nomination), a coalition of other Democratic Senators and Republicans in the upper chamber may be strong enough to prevent any open or organized fight on Kuykendall's confirmation from ever materializing.

WILLIAM R. CONNOLE, another member of the Federal Power Commission, has also written Representative Harris suggesting amendments to the administration bill to relax federal controls over natural gas producers. Connole was absent from Washington when other members of the commission took their formal position on the bill, and his letter was in response to a suggestion by the House committee that he submit his opinion. He stressed that his letter contained only his opinions as to how the bill could be made more effective to carry out congressional policy.

Connole wrote he saw no need for producers to secure certificates of public convenience and necessity before beginning business. As now interpreted, he wrote, the present law "inordinately restricts" the FPC in rate-making theory especially in denying the commission the use of costs as a factor in rates. He also objected to requiring the commission to determine the reasonable market price for gas as much as twenty or thirty years in the future.

REA Interest Payment Rules Changed

REA has published a bulletin announcing policy changes on the repayment by borrowers during early years of loans, frequently called the honeymoon period. Requirements have been made somewhat less liberal, even though the 2 per cent interest rate has not been changed. In the past, REA allowed a new borrower liberal concessions during the honeymoon period on the repayment of principal and interest. This was in order to enable the new borrowers to get their plants completed and seasoned in operation, and actually producing a fair volume of revenue before assuming the full burden of instalment payments.

In the past, REA allowed a honeymoon period of three years on telephone loans and five years on electric loans, starting from the date of the borrower's note. These periods have not been shortened, as far as repayment of principal is concerned. But from now on interest payments are going to start right away and will be paid in quarterly instalments as the interest ac-

crues. This new interest payment requirement brings the REA method of collecting future REA loans into line with general practice—in and out of government—of applying payments on loans. This practice, known as the United States Rule, will not affect REA loans dated prior to June 5, 1957.

FURTHERMORE, all interest must be paid as of any given date before payments are applied on principal of the loan. In the past, payment of interest was postponed during the early part of the loan. And after that, accrued interest was paid back by instalments over the remaining life of the loan. REA makes one new concession for borrowers in its latest bulletin. It permits loan funds to be used for interest payments during construction and development. In this way the borrowers will be able to meet interest obligation as it accrues without dipping into principal funds held for construction and development purposes.

Federal Commissions on the Carpet

A SPECIAL House subcommittee is now organizing for an investigation of policies and operations of federal regulatory agencies. This special group, which goes under the unusual name of the "Subcommittee on Legislative Oversight," has been granted $250,000 to look into every phase of the activities of the Interstate Commerce Commission, Civil Aeronautics Board, Federal Power Commission, Federal Trade Commission, Federal Communications Commission, and Securities and Exchange Commission. The inquiry was motivated by complaints that some regulatory agencies are dominated by the industries they are supposed to regulate. Chairman of the subcommittee is Representative Moulder (Democrat, Missouri). The investigation will be directed by Walter M. W. Splawn, former chairman of the ICC.

The selection of Splawn, who has wide regulatory experience and familiarity with problems peculiar to quasi-judicial agencies, is regarded as some assurance that the inquiry, which could become the occasion for politically partisan needling of the regulatory commissions and the federally regulated public utilities of all kinds, will be kept more or less within constructive bounds. More light on this point will be available when the subcommittee counsel is named.

A House antitrust subcommittee has criticized the FCC for fraternizing with the radio and television industry. It advised the regulatory agencies to adopt a "code of ethics" prescribing "informal" meetings that it said had become a practice in recent years. "The evidence demonstrates that, for at least the past ten years, an air of informality has surrounded cases pending before the commission," a report declared.

THE subcommittee conducted extensive hearings on whether the seven-member commission was discharging its "antitrust responsibilities" in the broadcasting field. In the report, the subcommittee said testimony had included many references to "private conferences and discussions" between commission members and industry representatives on pending cases. The report added: "The committee recognizes the need for some informality in certain phases of the commission's work, but where conflicting rights or claims of parties are being adjudicated, informal 'ex parte' discussion between a commissioner and a litigant or his representative treads dangerously to, if it does not transgress, the outer limits or due process of law."

Bills in Congress

A FORM of partnership development of the Trinity River project (California) was recommended by Interior Secretary Seaton after a re-examination of the costs to "preference (government agency) customers." Seaton's earlier endorsement of Pacific Gas and Electric Company's proposal to develop the power phase of the project was withdrawn pending a restudy of these costs. Seaton said that federal agency and co-operative members would have to pay $115 million more for power over a 51-year period under the "partnership plan" than they would have to pay under all-federal government development. His earlier figure of $86 million, he said, was in error through the inadvertent use "of an outdated rate schedule."

Seaton said the PG&E proposal "will still mean a considerable immediate monetary saving to the government and widespread benefits from increased tax revenue and income to the project over the 50-year period of company operation." The $115 million was termed an estimate of the "magnitude of the double subsidy which a few preference agencies, already tax exempt, would enjoy if they also received tax-free federal power at the expense of water users and taxpayers generally." (The "preferred" group was estimated at 7 per cent of the people of northern and central California.) This view was expressed by R. H. Gerdes, PG&E's executive vice president.

Gerdes said that Senator Kuchel (Republican, California), in earlier statements, had ignored "benefits" to the federal government from Trinity joint development, as found by Secretary Seaton, which would far outweigh any alleged added power cost to federal agencies. These benefits, Gerdes added, include $165 million for temporary use of the falling water to generate power and $83 million in federal taxes. Another $62 million in taxes would be received by state, county, and local treasuries in California. These total benefits of $310 million were not changed in any way by Interior's new estimates, according to Gerdes.

A SENATE subcommittee compromise on allocation of power from the proposed Niagara river project improves chances that Congress will authorize construction of the project by the New York State Power Authority at this session of Congress. The Senate Public Works Committee is expected to approve soon a bill reconciling differences between supporters of a federal-type preference clause and those who would rather have New York law govern this question. The compromise allocates one-half of the full production of the project, estimated at 2 million kilowatts, for public power purposes under a federal preference clause. Niagara Mohawk Power Corporation would be guaranteed 450,000 kilowatts. Governor Harriman (Democrat) of New York has endorsed the new proposal since it retains the principle of preference for public agencies.

What will be the effect of the recent decision of the U. S. circuit court of appeals for the District of Columbia? The court decided (2 to 1) that the FPC—not Congress—had the authority to grant licenses for Niagara development. Three courses seem to be open. An appeal to the full nine-judge court. Or Congress might go ahead with the pending legislation, changing it so as to make the court's decision moot. It is hardly likely that the third alternative—final licensing by the FPC—will prevail.

Telephone and Telegraph

FCC Frequency Allocation

DONALD C. POWER, president of General Telephone Corporation and the United States Independent Telephone Association, was lead-off witness in hearings before the Federal Communications Commission to determine proper allocation of radio frequencies above 890 megacycles. The telephone industry is particularly concerned that the FCC might decide to license private communication systems to industrial users of radio facilities to operate in a field traditionally handled by telephone and telegraph companies.

Power warned that "the authorization of private point-to-point microwave systems under these circumstances would have a detrimental effect on the ability of telephone companies to serve the public interest. Such action would not be in accordance with a policy of preserving and protecting telephone common carrier service for the public benefit and would encourage persons desiring to establish private systems." He added that "The commission would be put in the position of fostering private systems which would in effect result in cream-skimming operations."

Power said that, in many instances, the proposed private systems would parallel existing routes from which a number of independent companies obtain a substantial portion of their revenues.

Power predicted that the adoption of a policy permitting private systems to compete with telephone company service would seriously hamper improvement and expansion of an efficient nation-wide communications service. He warned that state regulatory authorities would be reluctant to require or urge telephone companies to install facilities when their economic well-being might be impaired by competition from private systems.

"AN adequate and efficient nation-wide communications system can be maintained only if its local component telephone common carrier systems remain economically healthy," Power told the commission. "This commission should, therefore, when arriving at a decision as to whether a private system should be permitted, give consideration to the availability of telephone company common carrier facilities. In the event such facilities are available or will be made available within a reasonable period, permission to establish a private system should be denied in the public interest."

Another compelling reason why the FCC should discourage such private systems is that they would unnecessarily increase demands for and use of radio fre-

quencies, Power said, contrary to the need for conservation in the public interest of the limited amount of spectrum space now available. "So long as persons desiring frequencies have reason to believe that assignments can be obtained on an individual basis," he said, "the commission will be confronted with demands for frequencies by various groups that would otherwise obtain from telephone common carriers leased line and other types of service needed to meet their requirements."

Union Group Insurance

A GROUP insurance plan negotiated in May between General Telephone Company of California and the Communications Workers of America is likely to set the pattern for such plans, at least in the independent segment of the industry. The agreement with the California company has already been followed up by agreements with eight other General units, including Wisconsin, Missouri, Southwest, Kentucky, Ohio, Ohio Consolidated, Indiana, and General of the Southeast.

The important provisions of the agreement are as follows:

(1) All employees with a minimum of three months of service will be provided with free insurance in the amount of one year's wages rounded to the next higher multiple of $100.

(2) Employees who have more than three months of service shall also be permitted to purchase contributory insurance in an amount equal to an individual's annual earnings increased to the next higher $1,000 unit, at the rate of 60 cents per month per $1,000 of insurance coverage. It will not be necessary for an employee to participate in the contributory portion of this plan in order to obtain the free insurance. The union was also successful in obtaining an additional provision which will provide that all refunds owing to experience rating at the end of each year will be returned to the employees who have purchased contributory insurance to the extent that the return premium reduces the initial premium paid to any amount that is less than 60 cents per month per $1,000 of insurance coverage. In other words, if the net cost of the insurance plan at the end of the year should amount to 35 cents per month per $1,000 of insurance, each employee who is participating in the contributory phase of the program would therefore be entitled to a refund of 25 cents per month per $1,000 of insurance.

(3) Any employee who become totally disabled before having attained the age of sixty will be paid the total amount of free insurance and contributory insurance in a fixed number of instalments. Any further payment by the employee for the contributory insurance will be waived.

(4) Free life insurance on a graduated scale will be provided for pensioners who retire subsequent to the effective date of the agreement, provided they have participated in the contributory insurance plan.

(5) A disclosure clause has been included in the contract which will permit the union to obtain pertinent information from the company and insurance carrier concerning the operation, administration, and cost of the group insurance program.

(6) A grievance and arbitration procedure has been included in the agreement, in addition to a clause prohibiting the company from discontinuing or making any changes in the plan without the prior approval of the union.

TOTAL insurance under the General of California contract is well over $50 million. The union estimates that when all contracts are completed with other General units, the total insurance in force for

CWA-represented workers will be over $100 million.

Italy Takes over City Phones

THE Italian government has decided to nationalize urban telephone services now operated by five large companies under government license. The licenses, granted to the five companies in 1925, expired June 15th and will not be renewed.

The telephone industry is the latest in a long list of enterprises to fall under the control of the government. The state at present has a monopoly of telegraphs, tobacco, matches, and salt, and a quasi-monopoly of gambling and the railroads. Moreover, it owns in terms of invested capital almost two-thirds of mining, more than one-third of the metallurgical industries, and more than one-third of transport.

The trend toward socialization in Italy, well under way before the advent of Mussolini in 1922, was accelerated during the depression of 1929 to 1933. In the years following World War II, industry and other enterprises had to rely so much on government subsidies that the state's penetration into fields formerly reserved to private enterprise grew by leaps and bounds.

The telephone industry was started by private enterprise in the last century and was nationalized in 1907. The service became so bad, however, that the decision of the Fascist government to give the urban telephone business back to private companies won general approval. Licenses were granted for thirty years and expired in 1955. Renewal of the concessions for twenty years was considered but instead two one-year extensions were granted. Now the decision has been reached to renationalize the companies.

PRIVATE companies gave Italy an efficient telephone service at low rates. In Rome a telephone in a private home costs little more than $1 a month. The cost includes 120 free calls. After that, the cost is one and one-half cents for each call. Despite the low rates, the number of telephones in Italy has remained low. In the whole country, which now approaches 50 million inhabitants, the number of telephones has barely reached 2 million.

European Radio Links Symposium

PREDICTIONS of the impact of solid state electronics on modern technology and the announcement of the development of a new microwave radio relay system using many of the new solid state devices were made at a European symposium on radio links which opened in Rome on June 5th. Dr. M. J. Kelly, president of Bell Telephone Laboratories, and M. B. McDavitt, director of transmission development of the Laboratories, presented papers at the symposium, sponsored by the Italian National Research Council.

Mr. McDavitt's paper described a microwave radio relay system which has been under development at Bell Telephone Laboratories and which is called the "TH" system. This system takes advantage of much of the advanced solid state and other electronic technology developed at Bell Laboratories in recent years.

It makes highly efficient use of the overcrowded radio spectrum, promising to increase more than three times the information-handling capacity of radio relay systems occupying comparable spectrum space. The "TH" system will be capable of carrying more than 10,000 telephone conversations, or 12 television programs plus more than 2,500 telephone conversations.

Financial News and Comment

By OWEN ELY

Are Commissions Reversing Policy on Tax Deferments From Accelerated Depreciation?

A GREAT deal of confusion still exists over accelerated depreciation and the best way to handle the accounting treatment of resulting tax deferment. F. Merrill Beatty, a partner in Arthur Andersen & Co., well-known certified public accountants, has tabulated the treatment reflected in 175 of the 1956 utility reports to stockholders as follows:

Number of reports reviewed		175
Deduct—		
Number of reports making no disclosure in statements or in notes	20	
Number of reports indicating accelerated depreciation was not deducted for tax purposes	2	22
Number of reports dealing with such deferred taxes		153
In these reports a charge was made in the income account for deferred taxes and the credit therefor was included in the balance sheet as follows—		
Reserve for deferred taxes	89	
Appropriated surplus which was classified as a reserve	4	
Accrued taxes	12	
Reserve for depreciation	4	109
Balance		44
Of this balance 27 companies credited appropriated or restricted surplus and included such credit as part of the common stock equity		27
The remaining 17 companies reflected the deferred taxes in income and thus increased reported net earnings		17

This indicates that a substantial majority of companies are reflecting the tax deferment as a charge to expense with credits to balance sheet accounts outside of the common stockholders' equity, which Mr. Beatty believes is the proper treatment. Twenty-seven companies include the credit in common stockholders' equity and only 17 companies reflect the tax deferment to increase income and hence earned surplus.

CERTAINLY all of these various ways of reflecting the tax deferment cannot be right. If a company normalizes for deferred taxes, it is providing for a future tax and there is no more reason for including this liability as part of the common stockholders' equity than there would be to include the balance of the tax liability in such equity, Mr. Beatty points out.

If a company *does not* normalize, it is inflating its income account for a current

DEPARTMENT INDEX

	Page
Are Commissions Reversing Policy on Tax Deferments from Accelerated Depreciation?	34
Table—Current Yield Yardsticks	36
Heavy Construction and Financing Force Money Rates Still Higher	39
Tables—Recent Financial Data on Gas, Telephone, Transit, and Water Stocks	40, 41, 42

tax benefit that will be payable in the future, and has not charged the income account with the cost of producing this tax credit. This is a violation of the generally accepted accounting principle of tax allocation.

Also, when earnings are inflated by not providing for deferred taxes and these reflect an excessive return, regulation seems likely to take the excess earnings from a company and give them to the customer. (See later discussion of specific cases.) The company then takes all the risk, with no compensation therefor, that it can collect the increased taxes in the future. If Congress had wanted to reduce taxes it could have done so. Instead, it merely changed the timing of the depreciation deduction and this did not create income. At the time a company decides to take more tax depreciation than it records on its books and recovers through rates, it knows it is incurring a cost that will have to be recognized in the future and this cost should be provided for currently. Some utilities would have had a very rough time in the 1940's with extremely heavy excess profits taxes—as a result of heavy tax depreciation taken in the 1920's and 1930's to save current taxes—if Congress had not obligingly come to the rescue with new rules.

If this cost should be recognized as depreciation — *i.e.,* tax depreciation would be booked and allowed for rate purposes—rates would have to be increased since the tax reduction is only about 50 per cent of the increased depreciation charge. Mr. Beatty feels that providing tax depreciation for book and rate purposes presents a difficult problem of proof and raises a question of the fairness of the higher depreciation charge to the present customer, with future customers getting the benefit of the use of property without paying their fair share of the cost. How can you prove that a plant built in 1954 depreciates on the accelerated basis while a similar plant built in 1953 depreciates on a straight-line basis? Yet, that is what is required by the law. On the other hand, if the cost of the current tax reduction is measured by the tax consequence of taking more depreciation for tax purposes, a reserve for deferred taxes is provided. In such a case, earnings and rates are not changed from those applicable to a company that did not elect to use accelerated depreciation for tax purposes. Further, both present and future customers would be treated fairly since both would get the tax benefit applicable to the depreciation costs they pay now, and no more.

There is not enough experience as yet to know how various commissions will deal with the credit for deferred taxes in rate determinations. The commissions know about the problem and it is very doubtful that their decisions will vary with the treatment of the credit on the balance sheet.

Further evidence that rate making will not be determined by the classification of the deferred tax on the balance sheet is the fact that several states have issued orders to different companies in the state, some of which permit the deferred tax to be reflected in restricted surplus, while other orders in the same state permit the credit to a reserve for deferred taxes. Further, in the Pennsylvania Power & Light Company rate case the commission deducted the deferred taxes applicable to accelerated amortization from the rate base although the company classified it as restricted surplus and included it in the determination of common stock equity.[1]

Commissioner Thompson of Colorado

[1] Pennsylvania Public Utility Commission *v.* Pennsylvania Power & Light Co. 14 PUR3d 438.

made a good statement on this problem of where the credit for deferred taxes should be reflected in his dissent in the Public Service Company of Colorado order dated January 5, 1956.[2]

Up to a few weeks ago some 30 state commissions had issued orders with regard to the accounting treatment for normalizing taxes resulting from accelerated depreciation and at least 22 had issued orders with respect to normalizing taxes resulting from accelerated amortization. The orders of the 30 states are summarized as follows:

Credit reserve	16
Credit restricted surplus	8
States in which some orders provide for crediting reserve and other orders provide for crediting restricted surplus	4
Credit reserve for depreciation (Wis.)	1
Credit income (Pa.)	1
	30

Under either the credit to a reserve or restricted surplus, the use of the account has been restricted to prevent its distribution for dividend payments and to assure that any subsequent increase in taxes resulting from the taking of accelerated amortization or liberalized depreciation will be charged to this account. The reason for the restriction is to make the credit available for increased taxes when tax depreciation on the property is less than book depreciation. Under such circumstances how can this credit be considered either earnings or part of the stockholders' equity?

THE Federal Power Commission early this year invited interested persons to submit their views on proposed changes in the Uniform System of Accounts for gas and electric companies, and in Annual Reports Form No. 2 and No. 1. The proposed changes provide that utilities electing to use deferred tax accounting, with normalization, must use a reserve account in the balance sheet rather than placing the amount in restricted surplus. The commission has not yet published the results of its inquiry. In an early order (Opinion No. 264 of December 4, 1953, Docket No. R-126) the FPC had permitted normalization of accelerated amortization and in a later case adopted the same policy for liberalized depreciation.[3]

American Gas & Electric issued a brief in connection with the FPC request for opinions favoring either (1) leaving the matter to the state commissions or (2) permitting either restricted surplus or reserve treatment. The brief pointed out that the American Institute of Accountants, while approving normalization, has never taken any stand regarding the use

[2] Re Public Service Co. of Colorado, 12 PUR3d 158, 162.

[3] Re Amere Gas Utilities Co. et al. Docket No. G-6358, 15 PUR3d 339.

CURRENT YIELD YARDSTICKS

	*June 15, 1957**	*1957 Range* High	Low	*1956 Range* High	Low	*1955 Range* High	Low
Utility Bonds—Aaa	3.90%	3.90—3.70%		3.83—3.08%		3.19—2.93%	
Aa	3.93	3.93—3.78		3.87—3.11		3.26—2.99	
A	4.10	4.10—3.92		3.92—3.27		3.36—3.12	
Baa	4.32	4.32—4.23		4.23—3.49		3.51—3.37	
Utility Pfd. Stocks—High-grade	4.71	4.71—4.37		4.68—3.92		3.98—3.89	
—Medium-grade	5.01	5.01—4.76		4.84—4.25		4.32—4.19	
24 Electric Utility Common Stocks	4.71	4.87—4.67		4.87—4.45		4.64—4.32	
30 Gas Utility Common Stocks	4.42	4.71—4.34		4.83—4.30		4.70—4.29	

*Approximate date.
Source of data, Moody's Service.

of a reserve, and that well-known accounting firms had certified both the surplus and reserve treatments for different utility companies.

The brief held that the reserve method is less realistic, since its advocates consider the tax savings as a "tax-free loan" when in fact there is no loan, no debtor, no creditor, and no debt. The brief stated, "One of the great advantages of the restricted surplus method is that the restricted surplus account is recognized by financial analysts as part of equity. . . . There is the danger that the financial analyst community which rates the bonds of utilities will regard a reserve as an offset against an asset account, or as a provision for an existing liability, and not be willing to treat it as the equity it really is." If it does not go into equity, the debt ratio automatically increases and future bond issues might be downgraded accordingly. It might thus force the company to do more equity financing, which would mean higher capital costs.

THIS raises the interesting question as to how a charge to expense, to recognize a cost, can at the same time create an equity for the common stockholder; calling it equity does not make it so. A number of analysts do not consider the credit as an equity, and several of those that do, state that they do so because the company itself does.

Meanwhile, the state commissions have begun to reverse their earlier policies with respect to permitting normalization of tax savings from accelerated depreciation. Four states—Maine, New Hampshire, Pennsylvania, and New Jersey—have indicated in rate decisions that they would like to give the consumer the benefit of the tax savings by preventing normalization of tax savings.

Public Service Company of New Hampshire on February 8, 1957, applied for an increase of rates amounting to $640,000. The commission about two months later gave a brief decision, concluding that "the company's accounting practices in the field of liberalized methods of computing depreciation are directly associated with rate structure. . . . It was originally assumed that these tax savings (from accelerated depreciation) would be of a temporary nature, and they would be exhausted in later years. It is now the considered opinion of utility accountants, and many regulatory commissions, that in the case of a growing and expanding utility, such tax savings will be continuous so long as the growth continues . . . Both the Federal Power Commission and the Federal Communications Commission have promulgated a proposed ruling making procedure for accounting, which has met with a sharp division of opinion as to acceptance by the various state jurisdictions. Several states have already registered vigorous opposition to the proposal. We are convinced other state jurisdictions will protest."

THE commission pointed out that Public Service of New Hampshire "cannot foresee the time when its plant will become static or will decrease," hence an "agreement" was reached that normalization of deferred income taxes (previously permitted in an accounting order) should be rescinded.

This automatically increased net operating income by $209,000 and the commission allowed an additional rate increase of about $165,000.

Mr. Beatty points out that this decision ignores the fact that the company is using up the value of its property by taking accelerated depreciation for tax purposes without reflecting the cost of doing so in its accounts or rates and wonders, under such circumstances, why a company would elect to use accelerated depreciation.

In Pennsylvania the state commission

last July ordered Pennsylvania Power & Light to reduce rates by $1.4 million, one of its reasons being that tax savings resulting from accelerated depreciation should not be normalized. The commission held that accelerated depreciation differs widely from 5-year amortization of "specifically identified large items of emergency facilities," and in effect creates a *permanent* reduction in taxes rather than a deferral. The commission's staff had received no response from invitations made to utilities to submit projections demonstrating that, under growth conditions expected to prevail, accelerated tax depreciation would *ever* be less than normal.

PRESUMABLY as a result of this and similar decisions, it is understood that Potomac Edison, Pennsylvania P&L, and some other Pennsylvania utilities have decided not to use accelerated depreciation. Under such regulatory treatment which denies the utility the benefits of § 167, there is no reason why a utility would elect to use accelerated depreciation and the order of the commission does not require such an election. In other words, the commission states that rates based on straight-line depreciation, with taxes computed on that basis, are fair. This being so, what is it that makes the rate unfair merely because Congress says a company can defer payment of part of the current taxes and use the money to build property and thus contribute to the general economy?

In Maine, Central Maine Power Company lost its appeal for a rate increase in March, 1957.[4] Among the three major factors involved in the decision was the commission's reversal of position regarding normalization, even though tax savings had not been included in the rate base. The company's 1956 report to stockholders states:

Besides defeating the intent of Congress, failure to normalize such taxes puts the company in the position of requiring a correspondingly greater amount of additional capital from outside sources, all of which carries with it additional cost. Furthermore, unless made up for in some other way, it can mean the company would pay a higher cost for its over-all capital requirements than would the utilities elsewhere, which are being accorded the right to normalize and with which we have to compete for the investor's dollar. All of this bears on the customer's interest as well as the question of the greater burden it places on customers in the future if tax normalization cannot be made available. In view of these important differences, further clarification would seem to be in order.

THE action of these four commissions may play an important rôle in other rate cases, particularly in California, where it is rumored that the staff would like to end normalization of tax savings from accelerated depreciation. In New York state the commission has not yet issued any order, despite extensive hearings; some utilities in that state normalize and others do not. The commissions are obviously motivated by the desire to bolster current net operating income and to increase the percentage now earned by the utility on its rate base (in one instance as much as one-half of one per cent); they evidently think that a "bird in hand" is worth two in the bush, so far as rates are concerned.

Thus it is obvious that the commissions, the utility executives, and the security analysts all face bewildering questions. The commissions, as indicated above, must decide whether to abandon normalization in order to get the temporary benefits for

[4] Re Central Maine Power Co. 17 PUR3d 452.

consumers at a time when the number of rate cases is increasing; and if they permit normalization they may still have to decide, as rate-making policy, how they will treat the credit for deferred taxes in relation to rate base. If they treat deferred taxes as a tax reduction and order the benefits passed on to current customers, the commissions ignore the fact that the utility is using up part of the value of its property without reflecting this in its accounts.

THE utility executive must decide whether (1) to use accelerated depreciation; (2) if it is used, whether to normalize; and (3) if normalized, whether to put the savings in a reserve or in a surplus—assuming that he has any freedom of choice under state or federal rules. With respect to (1) the attitude of the state commissions in rate cases may be determining. With respect to normalizing, he must take into account the attitude of utility analysts, a majority of whom seem to favor this policy (see results of the Irving Trust Company questionnaire, discussed in this department in the May 9th issue), and also the possible adverse effect on rate regulation of failure to normalize. With respect to (3) he should take into account not only the effects on his capital ratios in future years, but also the views of the accountants and analysts as to the logic and the ethics of the situation.

The security analyst is confronted with the problem of whether to accept earnings statements (especially share earnings) *as reported* by each company—or whether to adjust downward the earnings of companies that do not normalize in order to place these earnings on the same footing as those of the majority which do normalize. He also has to decide whether to include restricted surplus in common stock equity. In making these decisions he may risk the displeasure of some utility executives but, on the other hand, he has to consider his professional obligation to his employers and to investors.

Heavy Construction and Financing Force Money Rates Higher

WHILE the construction of new homes has been running below last year, outlays for new plant and equipment have continued to run well ahead of 1956 and are expected to increase through at least the third quarter of this year, according to a recent survey by the SEC and the Department of Commerce. Capital investment programs are expected to be at record-breaking seasonally adjusted annual rates of $37.3 billion and $37.9 billion, respectively, in the second and third quarters of 1957.

Thus capital programs in the first nine months of 1957 are expected to be about 9 per cent higher than in 1956, with most major industry groups contributing to the expansion. The rise in costs of capital goods accounts for perhaps half of the dollar increase. Utilities and railroads are showing the largest relative year-to-year gains in investment in productive facilities—27 and 22 per cent.

Partly as a result of this heavy construction program, new-money financing by electric and gas utility companies (including private placements) was about 44 per cent over last year in the first five months:

	Millions	
	1957	*1956*
January	$ 272	$ 146
February	377	147
March	467	162
April	220	437
May	356	279
	$1,692	$1,171

Because of the log gain of new issues

and the continued tightness of the money markets, the premium of yields on new issues over the "going yields" based on quotations for older issues (see table, "Current Yield Yardsticks," page 36) has steadily increased. Probably some kind of a record was established by the recent annual interest cost of 6.185 per cent for the $30 million Michigan Wisconsin Pipe Line first mortgage bonds due 1977. The coupon rate was 6¼ per cent and the highest competitive bid (there were only two in contrast to five or more under normal conditions) was 100.709. The bonds were priced at 102.889 to yield the investor 6 per cent to maturity. Nearly a year ago the company rejected all bids on a similar issue—the best bid being 100.65 for a 4¾ per cent coupon rate.

Even issues with convertible features have had to pay high rates, a typical recent rate for issues of subordinated debentures or preferred stocks being 5¾ per cent.

CHAIRMAN Martin of the Federal Reserve Board holds the key to the bond market trend, and he has not been talking recently. Since the beginning of 1955 the commercial banks have been selling governments in order to take care of the continually increasing demand for loans. Yet the Federal Reserve's total holdings of governments in mid-May were the lowest since 1952—though there has been no *substantial* change since the early 1950's. In the latter half of 1953 the FRB came to the rescue by increasing its bill holdings rather substantially, but recent bill holdings were slightly below the level of early 1953, with no brisk FRB buying.

RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Annual Rev. (Mill.)			*6/12/57 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earns.*	*% Increase*	*Aver. Incr. In Sh. Earns. 1951-56*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Pipelines									
$ 4	O	Ala.-Tenn. Nat. Gas	20	$1.20	6.0%	$1.36Ma	D4%	14%	14.7	89%	40%
16	O	Commonwealth N. G. ...	35	1.60	4.6	2.77De	6	X	12.6	58	39
17	O	E. Tenn. Nat. Gas	9	.60	6.7	.83De	30	X	10.8	72	19
19	O	Gulf Interstate Gas	11	.50	4.5	.77De	—	—	14.3	65	18
71	S	Miss. River Fuel	37	1.60	4.3	2.33De	16	8	15.9	69	50
80	S	Southern Nat. Gas	44	2.00	4.5	2.32Ma	NC	4	19.0	86	46
268	O	Tenn. Gas Trans.	34	1.40	4.1	1.85Ma	1	18	18.4	76	20
175	O	Texas East. Trans.	25	1.40	5.6	1.88Ma	D20	3	13.3	74	24
71	O	Texas Gas Trans.	21	1.00	4.8	2.10Ma	9	4	10.0	48	27
88	O	Transcont. Gas P. L.	20	1.00	5.0	1.43Ma	18	19	14.0	70	19
		Averages			5.0%				14.3	71%	
		Integrated Companies									
158	S	American Nat. Gas	58	$2.60	4.5%	$3.90Ma	D3%	13%	14.9	67%	35%
50	A	Arkansas-Louis. Gas	24	1.20(j)	5.0	1.56Ma	14	23	15.4	80	53
47	O	Colo. Interstate Gas	68	1.25	1.8	4.92Ma	D11	36	13.8	25	35
343	S	Columbia Gas System ...	18	1.00	5.6	1.41Ma	D2	7	12.9	71	43
7	O	Commonwealth Gas	7	.10	1.4	.54De	107	D	13.0	19	76
12	S	Consol. Gas Util.	15	.90	6.0	1.39Ja	15	—	10.8	65	61
266	S	Consol. Nat. Gas	48	1.90	4.0	3.58Ma	—	4	13.4	53	67
186	S	El Paso Nat. Gas	41	1.30	3.2	2.02Ma	10	7	20.3	64	24
44	S	Equitable Gas	32	1.60	5.0	2.28Ma	10	4	14.0	70	36
17	O	Kansas-Nebr. Nat. Gas ..	35	1.65	4.7	2.44De	2	3	14.3	68	30
95	S	Lone Star Gas	36	1.80	5.0	2.22Ma	D9	5	16.2	81	48
25	S	Montana-Dakota Util. ..	25	1.00	4.0	1.42Ma	D4	19	17.6	70	32
23	O	Mountain Fuel Supply ..	26	1.20	4.6	1.66De	10	9	15.7	72	57
81	S	National Fuel Gas	19	1.10	5.8	1.68Ma	—	8	11.3	65	62
113	S	Northern Nat. Gas	57	2.60	4.6	3.67Ma	11	7	15.5	71	37

43	S	Oklahoma Nat. Gas	27	1.50	5.6	2.11Ap	D10	6	12.8	71	29
113	S	Panhandle East. P. L. ...	53	1.80	3.4	2.75De	10	16	19.3	65	35
13	O	Pennsylvania Gas	24	1.20	5.0	2.26De	40	D	10.6	53	64
166	S	Peoples G. L. & Coke ...	45	2.00	4.4	2.93Ma	D9	7	15.3	68	42
34	O	Southern Union Gas	29	1.12	3.8	1.52De	D10	9	19.1	74	35
273	S	United Gas Corp.	37	1.50	4.1	2.43Ma	17	7	15.2	62	43
		Averages			4.4%				14.9	67%	
		Retail Distributors									
28	A	Alabama Gas	30	$1.60	5.3%	$2.11Ma	D10%	31%	14.2	76%	42%
44	O	Atlanta Gas Light	30	1.60	5.3	1.99Ma	D28	11	15.1	80	36
5	O	Berkshire Gas	15	.90	6.0	1.52F	22	46	9.9	59	35
6	O	Bridgeport Gas	28	1.60	5.7	2.62Ma	11	48**	10.7	61	43
4	O	Brockton-Taunton Gas ..	16	.90	5.6	1.29De	32	60	12.4	70	40
59	S	Brooklyn Union Gas	37	2.00	5.4	2.79Ma	D3	6	13.2	72	49
1	O	Cascade Nat. Gas	9½	—	—	Def.De	—	—	—	—	13
36	O	Central El. & Gas	16	.90	5.6	1.45Ma	D10	9	11.0	62	17
12	O	Central Indiana Gas	14	.80	5.7	1.06Ma	10	4	13.2	75	65
5	O	Chattanooga Gas	5	.30	6.0	.38F	D11	14	13.2	80	45
64	O	Gas Service	23	1.36	5.9	1.67Ma	D25	0	13.8	81	40
7	O	Hartford Gas	37	2.00	5.4	3.01De	39	5	12.3	66	48
2	O	Haverhill Gas	21	1.32	6.3	2.04Ap	23	2	10.3	65	58
31	O	Houston Nat. Gas	35	1.50	4.3	2.26Jy	24	6	15.5	66	22
17	O	Indiana Gas & Water ...	19	1.00(k)	5.3	1.51Ap	D5	9	12.7	66	45
45	S	Laclede Gas	15	.80	5.3	1.12Ma	D7	7	13.4	71	35
4	O	Michigan Gas Utils.	22	1.05	4.8	1.36Ma	D8	14	16.2	77	38
42	O	Minneapolis Gas	26	1.40	5.4	2.06Ma	—	14	12.6	68	38
15	O	Miss. Valley Gas	18	1.12	6.2	1.31Ma	D30	5	13.8	85	30
4	O	Mobile Gas Service	22	1.00	4.5	1.17De	D13	D	18.8	85	33
7	O	New Haven Gas	28	1.70	6.1	2.26De	D6	10	12.4	75	66
12	O	New Jersey Nat. Gas ...	30	1.20(i)	4.0	2.36Ma	12	—	12.7	51	32
80	O	No. Illinois Gas	18	.88	4.9	1.34Ma	D2	—	13.4	66	54
8	O	North Penn Gas	12	1.00	8.3	1.02De	23	7	11.8	98	56
6	O	North Shore Gas	15	.80	5.3	1.16De	23	6	12.9	69	54
224	S	Pacific Lighting	36	2.00	5.6	2.54Ma	D11	14	14.2	78	39
19	O	Pioneer Nat. Gas	29	1.32	4.6	2.02De	15	17	14.4	65	39
13	O	Portland Gas & Coke ...	18	.50	2.8	1.28Ma	16	8	14.1	39	36
2	O	Portland Gas Lt.	9	.75	8.3	.73De	D40	—	12.3	103	25
8	A	Providence Gas	9½	.56	5.9	.63De	6	15	15.1	89	60
3	A	Rio Grande Valley Gas ..	3	.15	5.0	.28De	7	9	10.7	54	58
5	O	So. Atlantic Gas	13	.80	6.1	1.05De	17	2	12.4	76	36
11	O	South Jersey Gas	27	1.40	5.2	2.12De	25	28	12.7	66	55
26	S	United Gas Impr.	37	2.00	5.4	2.45Ma	5	1	15.1	82	64
48	S	Wash. Gas Light	37	2.00	5.4	3.13Ma	D3	4	11.8	64	43
8	O	Wash. Nat. Gas	14	.10(l)	0.7	.35Ma	D20	X	—	28	41
7	O	Western Ky. Gas	12	.60	5.0	.87Ma	D31	20	13.8	69	38
		Averages			5.3%				13.4	71%	

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER STOCKS

Annual Rev. (Mil.)			*6/12/57 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earns.*	*% Increase*	*Aver. Incr. In Sh. Earns. 1951-56*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Communications Companies									
		Bell System									
$5,825	S	Amer. T. & T. (Cons.) ..	177	$9.00	5.1%	$13.18*F	—	2	13.4	68%	67%
274	A	Bell Tel. of Canada	43	2.00	4.7	2.25De	D3%	2	19.1	89	64
43	O	Cin. & Sub. Bell Tel.	87	4.50	5.2	5.58De	2	4	15.6	81	100
209	A	Mountain Sts. T. & T. ...	127	6.60	5.2	9.17F	15	13	13.8	72	68
308	A	New England T. & T.	135	8.00	5.9	8.31Ma	D6	4	16.2	96	60
792	S	Pacific T. & T.	130	7.00	5.4	8.79F	—	4	14.8	80	58
98	O	So. New Eng. Tel.	38	2.00	5.3	2.19De	13	3	17.4	91	59
		Averages			5.3%				15.8	82%	

		Independents									
5	O	Anglo-Canadian Tel.	39	$ .60	1.5%	$3.19Ma	11%	54	12.2	19%	44%
37	O	British Col. Tel.	44	2.00	4.5	2.86Ma	D2	12	15.4	70	38
3	O	Calif. Inter. Tel.	11	.70	6.4	.86De	D13	—	12.8	81	24
15	O	Calif. Water & Tel.	21	1.20	5.7	1.52De	4	10	13.8	79	42
16	O	Central Telephone	22	1.00(m)	4.5	2.00De	16	16	11.0	50	29
4	O	Commonwealth Tel.	14½	.80	5.5	1.17De	D10	—	12.4	68	38
4	O	Florida Telephone	24	.90	3.8	.86De	D2	D	27.9	105	42
237	S	General Telephone	43	1.80	4.2	3.14Ma	NC	32	13.7	57	37
15	O	Hawaiian Telephone	18	1.00	5.6	1.29Ap*	D11	19	13.9	78	42
6	O	Inter-Mountain Tel.	14	.80	5.7	.80De	D16	2	17.5	100	62
22	S	Peninsular Tel.	56	2.00	3.6	2.35Ma	D2	2	23.8	85	46
21	O	Rochester Tel.	20	1.00	5.0	1.62Ma	NC	6	12.3	62	39
3	O	Southeastern Tel.	17	.90	5.3	1.44Ma	4	13	11.8	63	42
9	O	Southwestern St. Tel. ...	20	1.12	5.6	1.58De	16	4	12.7	71	40
31	O	United Utilities	23	1.20	5.2	1.63De	D5	5	14.1	74	36
13	O	West Coast Tel.	18	1.00	5.6	1.38Ma	D11	18	13.0	72	41
252	S	Western Union Tel.	20	1.00	5.0	2.21De	5	15	9.0	45	86
		Averages			5.0%				14.0	69%	
		Transit Companies									
19	O	Baltimore Transit	12	—	—	$ .18De	D86%	X	—	—	28%
13	O	Cincinnati Transit	4	$ .30	7.5%	.48De	41	10	8.3	63%	46
8	O	Dallas Transit	5	.35	7.0	.90De	58	0	5.6	39	54
33	S	Fifth Ave. Coach	25	2.50	10.0	3.47De	21	4	7.2	73	63
244	S	Greyhound Corp.	16	1.00	6.3	1.27De	8	—	12.6	79	52
23	O	Los Angeles Transit	18	1.40	7.8	1.23De	30	11	14.6	114	92
26	S	Nat. City Lines	23	2.00	8.7	2.45De	D10	11	9.4	82	94
13	O	Niagara Frontier Trans. .	9	.60	6.7	.28De	D81	—	—	214	82
69	O	Phila. Transit	9	.60	6.7	1.67De	31	8	5.4	36	38
6	O	Rochester Transit	5½	.40	7.3	.68De	58	18	8.1	59	41
23	O	St. Louis P. S.	11	1.40	12.7	.69De	1	19	15.9	203	97
15	S	Twin City R. T.	16	1.80	11.3	1.21De	1	D	13.2	149	48
22	O	United Transit	5	.60	12.0	.88De	D15	21	5.7	68	48
		Averages			8.7%				9.6	98%	
		Water Companies									
		Holding Companies									
40	S	American Water Works .	10½	$ .60	5.7%	$1.00Ja	2%	6	10.5	60%	16%
		Operating Companies									
5	O	Bridgeport Hydraulic ...	30	$1.60	5.3%	$2.10De	2%	4	14.3	76%	58%
13	O	Calif. Water Service	39	2.20	5.6	3.17Ap	14	3	12.3	69	32
4	O	Elizabethtown Water ...	37	1.60	4.3	3.28De	16	31	11.3	49	56
9	S	Hackensack Water	40	2.00	5.0	2.87De	D20	2	13.9	70	37
8	O	Indianapolis Water	18	1.00	5.6	1.42De	D12	17	12.7	70	34
5	O	Jamaica Water	33	2.00	6.1	2.88Ma(N)	2	8	11.5	69	25
4	O	New Haven Water	56	3.00	5.4	2.88De	D13	—	19.4	104	58
2	O	Ohio Water Service	26	1.50	5.8	2.35Ma	D5	7	11.1	64	36
8	O	Phila. & Sub. Water	31	.50(e)	1.6	3.08Ma	36	3	10.1	16	28
2	O	Plainfield Un. Water ...	61	3.00	4.9	5.04De	D6	5	12.1	60	39
4	O	San Jose Water	44	2.80	6.4	3.59Ma	7	9	12.3	78	45
10	O	Scranton-Springbrook ..	17	.90	5.3	1.38Ma	—	8	12.3	65	29
5	O	Southern Calif. Water ..	14	.80	5.7	1.19Ma	13	8	11.8	67	34
4	O	W. Va. Water Service ..	19	1.40	7.4	1.67Ma	7	—	11.4	84	17
		Averages			5.3%				12.6	67%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Ju—July; Au—August; Se—September; Oc—October; N—November; De—December. (e)—Also paid 5 per cent stock dividend December 1, 1956. (i)—Paid 2 per cent stock dividend December 10, 1956. (j)—Paid 10 per cent stock dividend November 21, 1956. (k)—Paid 3 per cent stock dividend December 19, 1956. (l)—One share of Pacific Northwest Pipeline for 70 shares held. (m)—Paid 10 per cent stock dividend January 2, 1957. (N)—Adjusted to eliminate 66 cents per share of nonrecurring tax savings. NC—Not comparable. NA—Not available. X—Deficit in 1951. *On average shares. **1951 was an abnormally bad year.

What Others Think

EEI's Annual Convention

THE electric industry has continued to live up to its high engineering standards as it continues to add enormous amounts of power capacity to serve the growing needs of the American people, said the Edison Electric Institute's president, Donald S. Kennedy, in the opening address to the institute's twenty-fifth annual convention in Chicago last month.

America's generating capacity, reported Kennedy, keeps well ahead of the demands for power. Compared to the rest of the world, the United States has more electric power capacity than the next seven countries of the world combined and four times as much power capacity as the next ranking country, the Soviet Union. The American electric light and power companies alone have installed new capacity in the past five years equal to all of the present installed capacity in Russia. America's power companies will build in the next five years more new power capacity than the total now installed in Russia. Said Kennedy:

> Sometimes we hear of a kilowatt race between America and other countries. We have already won the kilowatt race and we expect to keep on winning it by installing new power capacity to keep America ahead. In Russia, where the government plans, owns, and operates all the power facilities, there is a total installed capacity of 32 million kilowatts for 200 million people, as compared with America's 120 million kilowatt total to serve 170 million people. Under these circumstances there can hardly be any comparison of the state of development of electric power in the two countries. The so-called race is in reality a myth.

THE reason for this, said Kennedy, is that America's faith in the electric industry, as expressed by the action of free investors in putting their savings in the business, has permitted the industry to build facilities when they were needed. In 1947, he said, the American people had about $14 billion invested in electric utility plant of the investor-owned companies. Investment presently is $33 billion. Ten years from now it is expected to be between $65 and $70 billion.

"In this fact, of course," said Kennedy, "lies the principal difference between the operation of the power business under the free enterprise system and the operation of the power business by government. Under our free enterprise system, every individual is free to invest or not to invest in the business. If a person owns a bond or a share of stock, he is free to sell or not to sell it at any time at the market price. When the government owns and

operates a business, the individual is not free to decide whether or not he wants to be an owner. He is a forced owner because he is a taxpayer. He is not free to sell his interest in a government power project."

NATIONAL power policy and the trend toward federalization of the electric power industry held the center of the stage at this year's EEI convention. An ironic feature of government encroachment in the power field is the fact that there has never been a genuinely popular demand for federal power, Edwin Vennard, EEI's managing director, told the delegates.

The indifference of the American people to the government's operation of businesses in competition with private enterprise was attributed by Vennard to a lack of information. He added:

> Surveys and studies have established an unshakable correlation between information or the lack of it and basic philosophical beliefs: The more people know about our economic system the more they tend to favor the free enterprise system.
>
> The electric companies discovered that much of the indifference toward the electric industry could be attributed to a lack of knowledge of the facts. Although average price of household electricity is only about 34 per cent of what it was in 1916—while the cost of living has increased two and one-half times—the general public was not aware of this trend.
>
> Advertising programs were designed to let the people know about the power business and its price record. Measurement of knowledge and attitude was made before and after the programs. Every survey indicated that when the people had the facts, their opinions changed about government operation of power business.

ANSWERING the question of why government encroachment continues despite the industry's excellent record in areas of engineering, finance, sales, economics, price, and service, and when the majority of the people do not want it, Vennard said:

> Perhaps it is safe to say they are unaware that the government gives tax money without interest to federal power projects — purely commercial operations; lends money to further these commercial power operations at an interest rate below the market price; gives tax discrimination and preference in the sale of government power.
>
> Government subsidies enable government power projects to sell power below cost at the expense of the nation's taxpayers. If two of TVA's subsidies—cost of money and taxes—were removed, TVA's rates would have to be nearly doubled in order for it to break even—except the rate charged to AEC. This rate is already about the same as rates charged AEC by power companies. Thus the taxpayers, who own AEC, subsidize TVA but get none of the subsidy back in the electricity they buy from TVA. All other users of TVA power are getting it at about half price —at the expense of the nation's taxpayers.
>
> Our experience indicates only a few people know that TVA has never been declared constitutional or that the federal government has been lending money to other projects at an interest rate below the market price.

Citing the change in TVA's operation as an example of a trend on the part of the people to ask the government to do for them things they can and should do for themselves, Mr. Vennard pointed out

that in 1939 all but one per cent of TVA's electricity was hydro power, while today 75 per cent of the total generated is by steam plants.

"TVA was intended to be a project for the building of a series of dams primarily for flood control and navigation on the Tennessee river," he said. "Although it was believed that under our Constitution the federal government could not build power plants for the primary purpose of generating and selling electricity, by 1956 82 per cent of the investment in TVA was devoted to power facilities." Vennard continued:

> Basically there are only two economic and social systems: one in which the government assumes the citizens' responsibilities for their own welfare and the other a system in which the individual takes care of himself, with a limited government to maintain order and fair play. Under the first system the individual is not free; under the latter system man retains his freedom from domination by other men.
>
> All of those systems under which freedom is absent have in common the fact that government either owns or operates the machinery of production, and in all those systems the government owns or operates the power business as part of that machinery.

The Edison Electric Institute managing director told the utility executives that "we have within our hands valuable tools with which we can cope with government encroachment into the power business. More important," he added, "these same tools can help in dealing with the bigger problem of the trend toward a system where people depend upon government and not themselves for their personal well-being and security.

"As leaders in the power business we have a responsibility to the society in which we live—a responsibility greater than that of any other businessmen because we know more about the problem," Vennard said. "We have faced it; we have developed a means to cope with it. We have evidence to indicate that the solution is in our hands."

WIDER acceptance of the private enterprise concept cannot be brought about until its adherents themselves fully understand the private enterprise philosophy, Leonard E. Read, president of The Foundation for Economic Education, Inc., told the convention. Said Read:

> The government has departed from its limited position and entered enterprise after enterprise and assumed more and more responsibility for the welfare of its citizens, with the result that its take of all earned income today is about 33 per cent. Little more than a century ago, the average citizen had between 95 and 98 per cent freedom of choice with his income dollar. At that time all governments—federal, state, and local—took 2 to 5 per cent of personal income.

Those in the power and light business "must not remain idle except when Socialism poses a direct threat to this industry," he said. "It ought to be clear how woefully ineffective all of us are who come to life only when our own ox is gored. Imagine how effective it would be for medics and others to come to the aid of the power and light industry when 'public ownership' campaigns are on the rampage, and how equally effective this industry would be when making the private property case for others."

IN speaking of furthering the understanding of private enterprise, he said, "Our philosophy will prevail only when it

has thousands of sources, individual wellsprings from numerous walks of life, from persons qualified as teachers. It is a learning problem and the learning process presupposes two conditions: (1) A person must have a desire to learn a given subject; and (2) a source from which the learning may be drawn."

He added that "the development-of-self or improvement-of-source method is the only way of improving private property understanding."

It is not enough just to be *against* so-called public ownership, he told the institute; nor is it enough to be *for* private ownership. "The right to control the fruits of one's own labor—without which neither private property nor liberty can exist—depends on nothing short of eloquence, the skillful articulation of the ideas and ideals on which this right rests."

Read concluded:

> Every last one of us can and should make the effort, not halfheartedly, not as an off-hour exercise, but as an integral part of our every word and deed. Nothing less is at stake than the fulfillment of our personal obligations as business stewards, the existence of productive enterprise, and the open door to opportunity to all, now and as far into the future as we can see.

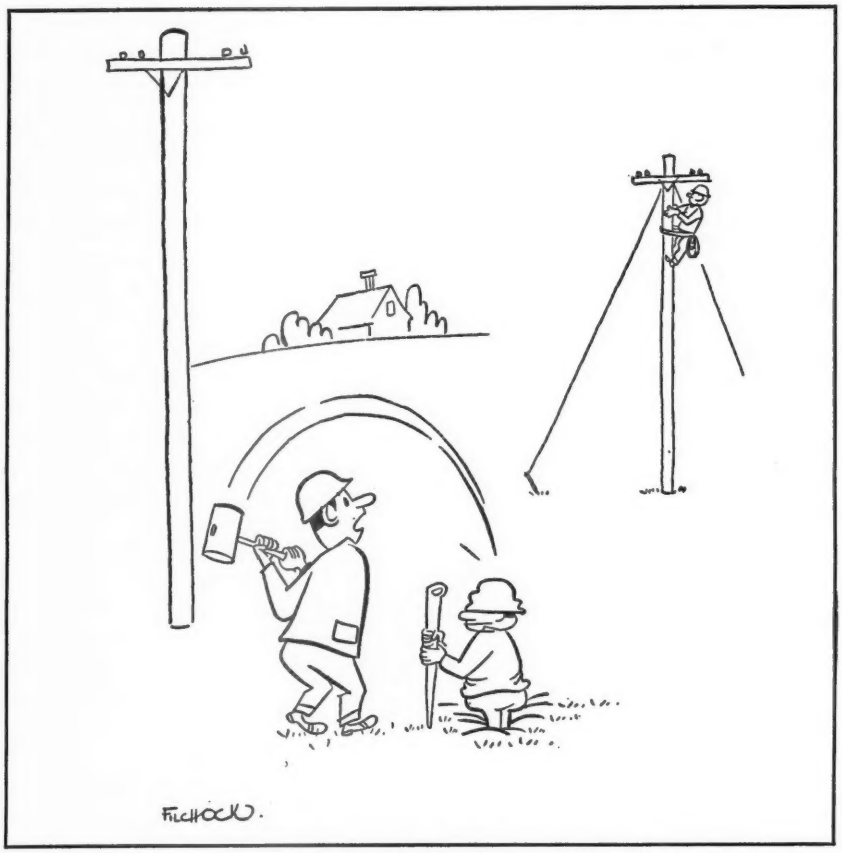
"SENTIMENT for business ownership of the electric power industry has been rising over the past fifteen years," Dr. Claude Robinson, president of Opinion Research Corporation, Princeton, New Jersey, told the convention. The speaker said:

> In 1941, our nation-wide study showed that 41 per cent favored business ownership. Today this has risen to 56 per cent. The public believes that business-managed companies give better service, but that government plants provide electricity at lower rates.
>
> Our research shows great public ignorance about the facts of the industry. Only 17 per cent know that city-owned electric systems do not pay federal taxes. Seventy-seven per cent say they should. Only 13 per cent know that federally owned power plants give preference to municipal electric systems, but 69 per cent say that all groups should have equal chance to purchase and use this power.

Dr. Robinson named information and activity as the keys to the increased effectiveness of the electric industry's public relations. "People need more facts," he said, "but the industry must show how these facts touch the average man's interest. If people have a clear understanding that they are now required to help pay the electric bills of others, sentiment for public ownership will continue to fall."

One of the best ways to get increased communications activity, Dr. Robinson pointed out, is to make every electric company employee a salesman for private ownership. "Very few people," he said, "say that an employee has talked to them about the issue of government ownership. If electric employees will work at this, public understanding of the issue can be increased."

THE continual overlapping of the jurisdiction of the federal government over that of several states has grown to an alarming extent and a national awakening is needed to restore the proper functions of the federal and state government to their rightful equilibrium, said H. Lester Hooker of the Virginia State Corporation Commission, in an address to the convention. Warning that such an awakening is not going to be an easy task, the commissioner said:



"AREN'T YOU GLAD YOU'RE NOT A LINEMAN? YOU COULD GET HURT ON THAT JOB!"

A new concept of government has grown in strength, in power, and in adherents . . . from all walks of life. So let us hope that a sentiment is now beginning to crystallize in a more determined and serious understanding of the federal government's continual expansion of statutory and administrative agencies and activities which are gradually eating into our statehood, destroying that balance between the several states and federal government.

Commissioner Hooker expressed a firm belief in complete regulation of the electric light and power industry and a strong opposition to government ownership or operation. He declared that "under state regulation private industry has had a major part in the amazing expansion of utilities since World War II." He cited the 145 per cent growth in the electric industry's kilowatt-hours during this period, compared to a growth of 85 per cent in gross national product.

"Judged by actual performance," the commissioner continued, "the over-all

results of our system have served the public remarkably well. This excellent record has not been due to regulation entirely," he added, "but is a manifestation of the success of the free enterprise system."

A regulatory commission, Commissioner Hooker told the electric utility leaders,

> . . . must have a balanced view, looking toward stimulation of utility expansion rather than only the cost of service to the public. We must not lose sight of the fact that fulfillment of our obligations to the public cannot be achieved unless the utility is in a consistently sound financial position.
>
> Only a healthy utility can develop new service, expand its business, and get the capital to properly meet the reasonable needs of the public. The commission that fails to permit a utility to continuously earn a reasonable and fair return is not properly protecting those who use the regulation to see that they receive efficient and dependable service.

He termed the development of public utilities an important factor in the growth and material progress of the nation, stating that "no industry has contributed more to the alleviation of toil, to the increase of commercial activity and productiveness, and improved the standard of living than electricity."

COMMISSIONER Hooker, in criticizing the government's policy of taxing private utilities, along with the general public, to support development and expansion of TVA, said:

> . . . the government should never create or assist in promoting any preference in favor of any business, nor favor one section of the country over the other.
>
> Why should not TVA stand on its own bottom, just like private enterprise has to do. If such development is to be used as a yardstick against privately owned and operated utilities, in the name of all that is fair, just, and honest, such a development should be placed on an equal and identical basis in every respect.

In conclusion, Commissioner Hooker urged the American people "to assume a renewed and energetic rôle in the affairs of government to preserve the rights so important to the American way of life." He said:

> There is no more important governmental or economic problem facing the nation today than the preservation of the rights of the states to regulate and control their internal affairs.
>
> It is time for all of us, individually and collectively, to take stock of our national government as it functions today. So-called "Good Samaritans" are steadily moving in on our personal liberty and freedom. If that freedom and initiative are destroyed, our nation will most likely fall into decay and disintegration.

ON the educational front, Dr. Curtis L. Wilson, dean of the University of Missouri's School of Mines and Metallurgy, reported that American industry, in its earnest desire to promote engineering education, has done much to make the engineering profession more attractive to young people.

Dr. Wilson said:

> Industry is anxious to improve opportunities in engineering by offering graduates attractive salaries, favorable and challenging working conditions, and other advantages. It is willing to augment the equipment of schools and colleges; it encourages high schools to

emphasize science and mathematics; and it advertises widely and uses many types of information processes to call attention to the urgent need for engineers and scientists.

REFERRING to the unselfish motives of many companies which offer handsome scholarships to assist worthy young people obtain an education, Dr. Wilson said: "The scholarships impose no obligations upon the recipients to apply for employment with the donors. These scholarships have helped and encouraged many young people, some of whom could not have completed their college years without that financial assistance."

With enrollment increasing in engineering colleges, Dr. Wilson pointed out that

> . . . the real crisis facing engineering education today, one shared by industry and the entire nation, is the need for engineering teachers. The situation in regard to grade school and high school teachers is gradually improving, but the lack of engineering college teachers is becoming worse.
>
> I venture now to make a suggestion intended to be wholly constructive. The great power companies need young engineering students. The companies are therefore anxious to help engineering colleges. Engineering colleges need teachers and cannot today provide salaries adequate to retain them.
>
> If the power companies could offer some sort of consulting work to faculty members, it would augment their salaries, increase their knowledge, and, therefore, their usefulness as teachers, and enhance their prestige in the eyes of their students.
>
> It could not help but direct the attention of many of their students to the attractive opportunities in the field of electric power, which opportunities to date scarcely have been noticed.

SPEAKING of the American civilization today, Dr. Wilson told the Edison Electric Institute,

> The public utilities of this country provide the strength necessary to carry this civilization along the road to survival. As is well known, the demands for electrical power will quadruple before the end of this century and any successful attempts to weaken the public utilities will only slow the progress of civilization.
>
> Every effort should be made to assist the public utilities to provide the power which will keep this civilization strong and free. The contribution that should be assiduously followed is the attraction of young engineers into that industry.
>
> The opportunities in the power industry are most alluring, not the least of which is the opportunity to serve society.

"The underlying foundation for any successful safety program is the attitude of management," said Allen S. King, president of the Northern States Power Company, in his address to the convention. "There can be no program without the blessing of management and its effectiveness can be measured by the degree of support management displays."

King said the only motivation for a safety program which will have sufficient power to carry through to a success is the desire to save people from injury and death. "No other motivation is even human or reasonable," King said. "We must never forget that safety is a very personal matter. There is a temptation," he continued, "to become somewhat mechanistic —to approach our safety programs with

such a degree of gadgets, charts, rule books, and techniques that the human touch is lost. After all, it is a person who gets hurt and people who suffer from tragedies attendant upon accidents."

THE second element suggested by King for a good safety program was knowledge. He explained:

> A knowledge of hazards leads to the development of safe working methods, safe tools, and other safety devices. Management must take almost complete responsibility in this field and engage in the necessary research to continually develop new and safer techniques.
>
> The third element in a good safety program—and the third great obligation of management in this matter—is education. Management must assume leadership in getting the proper story and proper attitudes to all levels of the organization.

The approach to an educational program should be personalized as much as possible by management, King further explained. "All educational programs on safety should be channeled to the individual and not to the masses."

KING said all safety work must be predicted on the fact that each individual reacts in his own way to his environment and safety programs should be flexible enough to fit the variations in the behavior patterns of people. "Safety really depends upon attitudes," he said.

The attitudes of the worker, the foreman, the supervisor, in addition to that of management—affect safety at work, King told the electric utility leaders. Regardless of the attitudes at all upper levels of an organization, all the work loses its effectiveness without proper employee attitudes, he added. "And it is a fundamental responsibility of management to do all in its power to influence those attitudes."

Capital Replacement: A Dilemma of Inflation

A GOOD analysis of a current dilemma of inflation—the problem of capital replacement—is contained in the May issue of *The Guaranty Survey,* monthly publication of the Guaranty Trust Company of New York. Regulated utilities will be the first to agree that in a quarter-century of monetary depreciation, few problems have been "more perplexing to businessmen or more menacing to orderly economic growth than that of financing the replacement and expansion of industrial plant and equipment. Obviously," the *Survey* states, "depreciation reserves based on the original cost-of-capital goods will not be large enough to replace these goods if the cost of replacement has been increasing. In the course of a sustained period of steadily rising costs, the deficiency can become an extremely serious matter, as more and more businesses are discovering."

ACCORDING to the *Survey,* the problem is aggravated by the continued use of accounting practices and tax policies founded upon the traditional assumption that money is a dependable standard and store of value over long time intervals, an assumption not difficult to refute on the basis of recent experience. It is, therefore, little wonder that some industrial managements are now in a real quandry over how to finance needed capital expenditures for which no adequate provision has been found possible and are calling upon government to re-examine the concepts of depreciation and profit underlying the revenue laws.

Although it has been recognized as a

serious problem for many years, the capital replacement controversy received wide attention at the close of World War II when the abandonment of government controls resulted in great price increases. But management won little support, either from the accounting profession or the government, for its view that the practice of charging depreciation on the basis of original cost only results in understating depreciation and overstating profits. Faced with this indifference, management resorted to numerous devices to make sure that funds needed for capital replacement should be withheld from distribution, even if such funds were reported as net income. Relief through accelerated amortization, and hopes that with the disappearance of the defense emergency prices and costs would level out and taxes would be reduced, pushed the problem in the background temporarily.

UNFORTUNATELY, management's hopes have not been borne out and discussion of the problem has revived. Costs continue to rise, certificates of necessity for accelerated amortization have been virtually suspended, and, with the exception of the abolition of the excess profits levy, taxes have not been reduced. For those companies now approaching the end of the five-year amortization period, the problem is particularly acute, since many of them face higher stated profits, heavier taxes, and reduced availability of funds for capital replacement.

The tax problem, notes the *Survey,* was recently described in the United States Steel Corporation's annual report for 1956 as follows:

> Income tax law limits the total depreciation recoverable during the life of a facility to the number of dollars originally spent for it years ago. But with the value of the dollar steadily declining the buying power originally expended cannot possibly be recovered under this unrealistic limitation. Faster recovery, such as has been permitted under certificates of necessity, tends to reduce the inadequacy which would otherwise exist; but the only real basis of recovering purchasing power would be to adjust for the change in the dollar intervening between the year of capital expenditure and the year in which depreciation is taken. . . .
>
> Short of legislative correction of the tax injustice or renewed granting of certificates of necessity the depreciation deficiency is destined to become more serious. Thus U. S. Steel's wear and exhaustion recorded for 1956 was $278 million, or about $67 million short of $345 million needed for buying power recovery. Included in recorded wear and exhaustion is $140 million of amortization which will decline and virtually disappear after 1958.
>
> As that happens the depreciation deficiency will actually increase and income will seemingly increase. Since taxes will increase by over half the decline in amortization, a curious and serious situation will result: At the very time that the business appears to have greater income the cash with which to conduct it is diminished. . . . The prospect is that the portion of reported income that must be regarded as "phantom" income, because it is required merely to maintain the business under conditions of continuing inflation, will increase.

AS the *Survey* points out, what is true of steel is true, in greater or lesser degree, of all business. An index of prices of business capital goods (plant and equipment), developed by the Machinery and Allied Products Institute, shows that the average cost of such goods approxi-

mately doubled between 1933 and 1947-49 and then, instead of flattening out as was generally expected, continued to rise at approximately the same annual rate, registering a further increase of nearly 50 per cent from 1947-49 to the present. Altogether, the average cost has approximately tripled since 1933.

Explains the *Survey:*

> If the expected flattening of the cost trend after 1947-49 had occurred, the level of costs underlying historical cost depreciation would gradually have approached the level of current costs, bringing the ratio between current costs and underlying costs toward unity. Actually, there has been some slight convergence—from 1.43 in 1947-49 to 1.33 at present. This slightly lower ratio, however, now applies to a much larger amount of depreciation, with the result that the aggregate deficiency—that is, the amount by which original cost depreciation falls short of providing for replacement at current costs—has continued to increase. It now amounts to approximately $6 billion a year, according to the institute's calculations.

This $6 billion figure, according to the institute, is the amount of capital consumption on which American industry will pay income taxes this year. "This," the institute comments, "is a curious state of affairs in a country devoted as this one to the idea of progress, economic expansion, and rising standards of living. For the taxation of capital consumption as income is not only inequitable, it has one certain effect: the retardation of progress through curtailment of the funds available to industry for capital investment. Under present conditions historical cost tax depreciation is a 'built-in' decelerator of progress."

As *The Guaranty Survey* notes, the federal government has done virtually nothing by way of recognition of the serious financial problem of capital replacement which business faces because of the shrinkage of the dollar. By way of contrast, a number of foreign governments have made broad tax concessions to lighten the burden on business concerns facing the necessity of replacing and expanding their capital assets at inflated costs. Although the Internal Revenue Code of 1954 does authorize the use of somewhat liberalized depreciation methods of which a large proportion of all business concerns have availed themselves, the *Survey* comments that the new formulas fall far short of meeting the problem of rising replacement costs. "In effect," says the *Survey,* "they amount to nothing more than a diluted form of accelerated amortization. Depreciation is still limited to original cost, and taxable income must still be reported accordingly."

What, then, should be done about it? The *Survey* concludes: "It is not necessary to disturb time-honored definitions of depreciation and profit. Capital replacement is more a problem of practical business finance than a question of accounting terminology. Instead of permitting depreciation reserves in excess of original cost, the purpose would be adequately served by tax-free accumulation of funds under some other name, such as special replacement reserves, for example. The additional funds must be set aside for replacement in any case, and it is both unfair and economically destructive that they be taxed as ordinary profit by the very government that has created the difficulty by failing to maintain the value of money. When the state of federal finances makes tax relief possible, this would be an excellent place to begin."

Regulation and Independent Telephony

SOME provoking thoughts on problems facing independent telephone companies were provided in a recent address to the Illinois Independent Telephone Association in Peoria. The speaker was R. B. Thomas, chief engineer of the Illinois Commerce Commission. Although praising the independents for the job they have done in meeting the expanding requirements for telephone service throughout Illinois during the postwar period, the record, according to Thomas, is not altogether without blemish.

One of the most serious problems facing the Illinois commission, said Thomas, concerns the uneconomic small telephone company, including both privately owned and mutual operators. Some progress has been made, but Thomas finds a reluctance on the part of many in the industry to meet the problem head-on. "We need your help in the reorganizations and consolidations which are often the only hope for salvation of these companies," he said. "Some cases are so far gone as to make even this impossible and absorption into larger systems is the only practical answer. Of course, those most intimately concerned and most badly hurt by the present situation are the present and potential telephone users located in these areas. The continuance of these problem cases is a stain on the industry and you as independent operators, at least equally with Bell, cannot escape responsibility for working toward a solution."

Delays in providing service, even by companies financially able, to applicants in outlying and sparsely settled areas, is another problem, Thomas said. He suggested that a closer adjustment of construction charges to current cost levels, and simplification or elimination of costly instalment bookkeeping, might provide a partial solution. Reluctance to move ahead with extended area service also bothers the Illinois commission, according to Thomas, as well as the incomplete and often inaccurate reports the commission receives from smaller companies.

MANY complaints of service breakdowns indicate that service problems have not been solved, even in the larger exchanges and the larger companies, Thomas continued. Rapid growth pains may be responsible for many service breakdowns, Thomas acknowledged, but pointed out that growth and expansion, either internal or through consolidation, cannot be built solidly on any foundation other than top-grade service. The real solution to this problem, he suggested, involves better long-range planning for every part of the operation, starting with management and ending with the day-to-day administration of the over-all job. ". . . I can't help but think that much of the activity throughout the telephone industry is short-term extemporizing rather than the kind of planning for the long term which alone can pay off to the consumer in terms of efficient management, economic operation, and high quality service," Thomas said.

Thomas suggested that independent companies make larger financial commitments required for long-range installations where earnings are a little above minimum level. "On this basis," he said, "I would think that some margin of earnings above the minimum not only would be appropriate but also would be in accord with the legal theory that management efficiencies, whether evidenced through effective long-range planning, new services, aggressive merchandising, or more economical operations merit regulatory reward."

The March of Events

Eisenhower Names Two to AEC

PRESIDENT Eisenhower recently nominated two former Truman administration officials, John F. Floberg and John S. Graham, to be members of the Atomic Energy Commission.

Mr. Floberg, who was Assistant Secretary of Navy for Air from 1949 to 1953, was named to succeed Democrat Thomas E. Murray, whose term expired June 30th. The White House listed Mr. Floberg as a political independent. A resident of Chicago, he is forty-two.

Mr. Graham served as an Assistant Secretary of the Treasury under President Truman from 1948 to 1953. He is a Democrat. On the AEC, he would succeed a political independent, the late John von Neumann, a scientist. Mr. Graham, fifty-one, is a native of Reading, Massachusetts. His home is Winston-Salem, North Carolina.

California

Electric Rate Boost to Be Sought

THE Los Angeles Municipal Board of Water and Power Commissioners announced recently that they would petition the city council to approve an ordinance increasing electric rates approximately $6 million annually.

If the proposed ordinance is approved, electric bills of 96 per cent of the city's home owners are expected to be hiked from 8 to 25 cents per month. The remaining 4 per cent, larger users of electricity, would pay from 35 to 60 cents more. Commercial and industrial consumers of electric power would find their bills increased generally from 3 to 10 per cent a month.

A spokesman for the municipal utility said the ordinance the council would be asked to pass would incorporate an "up or down" fuel adjustment clause.

Bond Enabling Bill Enacted

A BILL to allow the Sacramento Municipal Utility District to finance expansion of its electric distribution system through the use of revenue bonds up to $10 million a year was given final passage by the state legislature last month and sent to the governor for signature.

Assemblyman Roy J. Nielsen, Sacramento county Republican, said the revenue bond authority will enable SMUD to "proceed in a sound, businesslike way without undue hardship on power users in taking care of needed facility expansions."

Florida

Rate Cuts Ordered

FLORIDA POWER & LIGHT COMPANY and the Gulf Power Company were ordered by the state public utilities commission recently to reduce their electric rates by July 15th or show cause in a public hearing why the present rates are justified. The commission said that the two utilities, among the largest in the state, are earning "considerably in excess of the 6½ per cent found by the commission to be reasonable."

The commission scheduled a public hearing August 19th in Miami for Florida Power & Light and September 9th in Pensacola for Gulf Power. Both hearings were contingent on the companies failing to reduce rates.

The commission said Florida Power & Light earnings "appear to be excessive by approximately $4 million" and that Gulf's income is "apparently excessive by some $600,000."

McGregor Smith, board chairman of Florida Power & Light, declared in a subsequent statement that the company's earnings available for interest and dividends amounted to only 7.2 per cent on the company's investment. He said total capitalization of the company was $330,776,659 on May 31st and earnings for the previous twelve months totaled $23,892,367. Smith said that in his opinion "it is a reasonable return when it is considered that our construction program in the next five years approximates $375 million, for which we shall have to raise a lot of new capital."

Nebraska

North Central Wins Case

NORTH CENTRAL GAS COMPANY does not have to furnish natural gas at wholesale rates to the city of Bayard. The state supreme court recently reversed the state railway commission ruling in the case of the city of Bayard *versus* North Central. The court held that North Central is not a common carrier and, therefore, not subject to regulation by the commission.

In April, 1956, voters of Bayard approved taking over, by eminent domain, the franchise from North Central. North Central, which has owned and operated the retail distribution system in the town, objected to having to supply gas to the city as a wholesaler if the city took over the system.

North Central is a Wyoming corporation which furnishes gas from a gas field in Nebraska to several western Nebraska communities, including Scottsbluff, Gering, and Sidney, as well as Bayard. The city of Bayard had filed an application with the commission asking the commission to order North Central to furnish gas to the city at wholesale rates.

In what Commission Chairman Joseph Brown termed at the time "an unprecedented action," the commission ruled that North Central was a common carrier of natural gas in intrastate commerce and, as such, subject to regulation by the commission. The commission then granted the city's application for wholesale rates in the event that it took over the distributing system.

The court held that North Central's business is gas and not transportation and it does not furnish gas at wholesale rates to any other community it serves.

Texas

Power Franchise Vote Scheduled

A PROPOSED 50-year franchise for the Houston Lighting & Power Company, which officials said would save the city $1 million a year, will be submitted to the voters of Houston on July 27th. A feature of the new franchise is an increase in the annual gross receipts tax paid to the city by the company from 2 to 4 per cent of gross revenue.

City Public Service Director J. B. White and Houston Lighting & Power officials estimated that if the franchise is approved, the city will gain between $600,000 and $700,000 in revenue the first year and $1 million a year by 1960.

If the franchise is approved, the city and company have agreed on a separate rate ordinance under which the city will pay the same rates as industry for the energy used at City Hall and other municipal installations. However, the ordinance would drastically reduce the price paid by the city for most street-lighting purposes.

Vermont

Tax Legislation

BILLS providing for increases in state taxes on telephone and electric companies have been prepared by the ways and means committee of the Vermont house of representatives as a safeguard against a state budget deficit.

There were indications, however, that neither of the proposals would be introduced in the current state legislative session. Whether they are or not, it was reported would depend on how far the legislature goes beyond the program proposed by Governor Johnson.

One of the bills would raise the telephone company tax from 4½ to 7 per cent, to raise $745,000 in additional biennial revenue. The other would double the electric energy tax, increasing it from one-half mill per kilowatt-hour of electricity manufactured in Vermont to one mill. It is estimated this would yield $900,000 in additional biennial revenue.

Washington

Co-ops Form Agency

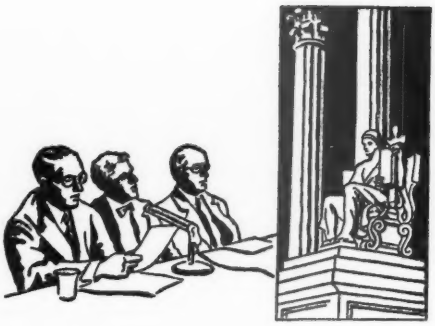
FORMATION of a corporation by 12 rural electric co-operatives in Washington, Idaho, and Oregon for electric generation and transmission was announced at Davenport, Washington, last month.

N. V. Fisher, of Lincoln Electric, Davenport electric co-operative, who is temporary chairman of the corporation, said it is the result of four years of organizational work and it will be the first corporation of its kind in the Northwest.

The new enterprise is Lewis-Clark G. & T. Co-operative, Inc. Incorporation papers were filed recently with the secretary of state at Olympia, Fisher said. He said that Walla Walla had been chosen as the tentative location of the new co-operative's headquarters.

The organization will investigate the feasibility of constructing its own dams and transmission facilities. Fisher said preliminary engineering has been done at several dam sites, but no applications have been filed with the Federal Power Commission for preliminary permits.

Also to be considered are forms of thermal generation.



Progress of Regulation

Trends and Topics

Public and Political Reactions to Rate Proposals Becloud Reproduction Cost Issues

UNFORTUNATELY for commmissioners, public utility companies, and the general public, proposals to change regulatory laws often arouse bitter controversy. Political broadsides are fired, and newspapers and their readers do not quite understand what it is all about. After the Democratic governor of New York called a special session of the Republican legislature to consider proposals which he favored, including the so-called "telephone bill," popular misunderstanding of the issue was very noticeable.

The New York court of appeals, last year, construed the statute governing telephone and railroad companies as requiring the commission to consider replacement, or reproduction, cost in fixing a rate base (12 PUR3d 399). The purpose of the proposed law was to free the commission from that requirement. After the legislature failed to pass the law at the regular session, its members were accused of acting in response to "the powerful lobbying of special interests." The governor was accused of demagoguery and trying to dictate to the legislature. The purpose of the bill, it was said, was to block a $55 million telephone rate increase. The legislature did not pass the bill.

Public enlightenment as to the facts seems desirable. In the first place, the legislation, according to reports, was favored by the New York commissioners because they believed the statute governing rate bases for telephone and railroad companies should be uniform with laws relating to other types of utilities. Like members of many other commissions, they have approved original cost as the proper measure of the rate base. A difference of opinion on that question in different jurisdictions is entirely understandable. Strong arguments have been advanced on both sides. No political implications should be allowed to control the solution of that important regulatory problem.

Elimination of reproduction cost as a factor would not "block" a rate increase. It would merely free the commission from the duty to consider that measure of value in addition to all the other evidence produced in the rate

proceeding. Commissions which consider reproduction cost often give very little weight to it, for various reasons. The evidence is frequently criticized. Questions arise as to reproduction cost of the present plant or of a modern substitute plant.

Piecemeal Construction Costs

One phase of this problem relates to the question of piecemeal construction. The New Jersey commission recently decided that in calculating reproduction cost, it would not be proper to compute construction cost on the basis of prices of materials and labor for piecemeal construction even though the facilities were constructed piecemeal (18 PUR3d 79). This was in harmony with a ruling of the New Jersey supreme court (95 PUR NS 467). Little significance, said the court, can be given to evidence as to the reproduction cost of property of an electric utility where the company proposes to reprice the surviving original cost of facilities to reflect the current purchasing power of the dollar on the basis of piecemeal reproduction cost rather than reproduction cost of the existing plant as a unit.

Similar decisions have been made in California (48 PUR NS 321), Idaho (6 PUR3d 428), Maine (98 PUR NS 344), Montana (74 PUR NS 36; 96 PUR NS 530), Oklahoma (9 PUR NS 113), Oregon (8 PUR NS 61), Pennsylvania (81 PUR NS 316; 86 PUR NS 292), Texas (20 PUR NS 89), Washington (37 PUR NS 321), and Wisconsin (13 PUR NS 224). The New York commission, at a time when it was considering reproduction cost, ruled that such costs were high to the extent that they were based upon a company's experience reflecting piecemeal construction without reflecting the economies of wholesale construction (13 PUR NS 134). An accurate appraisal of a gas company's distribution system, said the commission in another case, would assume a reproduction of the services in place as existing and not piecemeal reconstruction in scattered locations (21 PUR NS 353).

An increased allowance in reproduction cost for the cost of labor, upon the assumption that crews laying the entire mains as one unit would be less efficient than crews doing piecemeal jobs, was said by the Arizona commission to be improper, as this was a violent assumption contrary to reason and experience (6 PUR NS 49).

But the Missouri commission decided that an estimate of reproduction cost of a statewide telephone system should not be rejected or revised on the ground that reproduction costs of buildings were calculated on the assumption that each building would be covered by a separate construction cost, a piecemeal appraisal instead of a computation on the assumption that all buildings would have been included as a unit in a single contract. There was a heterogeneous body of property as to which physical location was not a controlling factor and it appeared that the end result would not be materially different if another procedure were followed (57 PUR NS 257).

The rate of return may fluctuate with different types of rate base, as was pointed out in PUBLIC UTILITIES FORTNIGHTLY, February 2, 1956, at page 201. In any event, too many factors enter into the rate-making process to attach such importance to proposed legislation.

Review of Current Cases

Appellate Court's Power Exhausted after Ruling on FPC Authority

IN a *per curiam* decision, the Supreme Court of the United States ruled that the review power of the court of appeals was exhausted when it held that the Federal Power Commission had authority under § 7(c) and (e) of the Natural Gas Act to issue certificates of limited duration.

The commission had denied a certificate of limited duration on the assumption that it did not have authority to issue such a certificate in view of § 7(b) providing for authorization to abandon service after due hearing. The court of appeals affirmed this order, notwithstanding the question of administrative authority, since it thought the applicant had not sustained its burden of proof.

But the court of appeals, having ruled affirmatively on the issue of jurisdiction, could not then properly affirm the order of the commission denying a certificate, on the ground that the applicant's proof of entitlement was inadequate. The Supreme Court reversed the lower court's judgment and ordered the cause remanded to the commission for determination of the application on the merits. *Sunray Mid-Continent Oil Co. v. Federal Power Commission, 1 L ed 2d 794.*

Administrative Subpoenas of Documents Upheld

REVERSING the court of appeals, the United States Supreme Court upheld a district court judgment ordering the Skycoach air travel system to produce books and records before the Civil Aeronautics Board. The board had charged Skycoach with violation of its regulations and the Civil Aeronautics Act. Subpoenas *duces tecum* were issued calling for production of certain categories of documents covering specified periods of time.

Skycoach declined to honor them, claiming that the subpoenas were vague, excessively broad in scope, and oppressive. An enforcement proceeding was thereupon instituted. The federal district court, in effect, sustained the board, finding that the documents were not immaterial or irrelevant to the administrative proceedings. In ordering the documents to be produced, however, the court allowed sufficient time so that Skycoach would not be deprived of all its books and records at the same time. The court of appeals reversed the district court, establishing procedural requirements for the board to follow.

In reversing the court of appeals, the Supreme Court noted that the district court's order duly enforced the board's right to call for documents relevant to the issues of the board's complaint, with appropriate provisions for assuring minimum interference with Skycoach's business.

The court also observed that the enforcement order would leave ample opportunity for objections to the admissibility into evidence of any particular document. *Civil Aeronautics Board v. Hermann et al. 1 L ed 2d 852.*

Order Denying Rehearing Not Reviewable under Holding Company Act

THE United States Supreme Court reversed a judgment of the United States court of appeals (14 PUR3d 391) holding that an order of the Securities and Exchange Commission denying rehearing of a holding company simplification proceeding was reviewable under § 11(b) of the Holding Company Act.

History of Proceeding

In 1953 the commission directed Middle South Utilities, Inc., and its subsidiary, Louisiana Power & Light Company, to divest themselves of all the nonelectric assets of Louisiana Power. No petition to review that order was filed within the allowable time.

Later the commission extended the time for compliance with the divestment order, and eventually the companies filed a plan as a step in compliance with the order. The commission issued a notice advising interested parties of the action so that they might request a hearing on the plan. At that time the Louisiana commission requested a hearing on the proposal as well as a rehearing of the divestment order. Also, at the suggestion of the Securities and Exchange Commission, it submitted an offer of proof and a brief in support of its petition for rehearing.

The offer of proof did not indicate any change in conditions since the divestment order, but, rather, complained that the evidence in that proceeding had been incomplete and that the commission had acted, in part, upon an erroneous conception of law. After hearing oral argument on the Louisiana commission's petition, the Securities and Exchange Commission denied the rehearing.

Conclusions

Section 11(b) of the act provides that the commission may by order revoke or modify any order previously made under this section, if, after notice and opportunity for hearing, it finds that the conditions upon which the order was predicated do not exist. It also provides that any order under this section shall be subject to judicial review.

In reversing the lower court the Supreme Court held that the orders made judicially reviewable by the statute are the directory orders mentioned in, and authorized by, subsection (b) of § 11 of the act, and orders which may "revoke or modify" any such order previously made under that section. It concluded that the statute does not include an order merely denying a petition to reopen § 11(b) proceedings. It followed, therefore, that the Securities and Exchange Commission's denial of rehearing was not reviewable. *Securities and Exchange Commission v. Louisiana Pub. Service Commission, 1 L ed 897.*

Natural Gas Producer's Contract Rate Increase Is Subject to Review

FOLLOWING decisions in several recent cases, the Federal Power Commission ruled that a contract rate increase filed by a natural gas producer was reviewable and suspendible by the commission under § 4 of the Natural Gas Act. The increase was held to be a rate change within the meaning of that section.

Section 4 provides for the filing of all rates under such rules and regulations as

the commission may prescribe, and for the filing of changes in rates. In accordance with this authority and § 16, the commission has provided that a change in rate includes future or periodic changes contained in the rate schedules of independent producers. Therefore, the commission observed, increased rates must be filed irrespective of whether they are contained in a contract previously filed as a rate schedule. The increase sought by this producer was not a unilateral change, but one agreed upon by seller and purchaser. Such a change is reviewable under § 4.

Evidence Insufficient for Increase

In support of the increase proposal, the producer submitted evidence of arm's-length bargaining, comparable prices paid in the general area, nation-wide statistics on the natural gas industry, prices of competitive fuels, and the effect of the increase on the consumer. But no evidence was presented to show that the proposed rates were no higher than necessary to encourage exploration and production.

This evidence was found insufficient to support the increase proposal. The commission said it had no authority under the Natural Gas Act to determine just and reasonable rates on the basis of arm's-length bargaining and market value alone, without evidence that the proposed increase is no higher than necessary to encourage exploration and production of gas reserves. The conventional rate base method of rate making is essential, it was said, at least as a basis of comparison or point of departure, in a proceeding for an increase in natural gas producer rates.

Since the producer failed to sustain its burden of proof, the commission granted motions to dismiss. The company was ordered to refund excessive rate collections pursuant to its agreement and undertaking. *Re Forest Oil Corp. Docket No. G-5510, April 26, 1957.*

Prices Properly Excluded from Telephone Directory Classified Advertisements

IT is not discriminatory or unreasonable, said the California commission, for a telephone company to exclude prices from advertisements published in the classified section of its directory. The commission reaffirmed this view in dismissing a complaint filed by an airline against a telephone company which declined to publish the airline's rates in a classified advertisement.

The company observed a policy of refusing to publish prices, in order to prevent misleading, unfair, or "bait" advertising. Noting that the company's directory is published only once a year, the commission pointed out that prices, if printed in the directory, would probably become unrealistic during a period of a year because of frequent variations in costs of labor and materials necessitating price changes. *Great Lakes Airlines, Inc. v. Pacific Teleph. & Teleg. Co. Decision No. 54809, Case No. 5855, April 9, 1957.*

Open Field for Advertising by Telephone Directory Covers

DISTRIBUTION of such accessories as opaque telephone directory covers for advertising purposes is an open field for advertising ingenuity, in the absence of

proof of substantial damage to the public interest in maintaining good telephone service, the Massachusetts supreme court indicated. The court sustained a lower court decree dismissing a suit by New England Telephone & Telegraph Company to enjoin the National Merchandising Corporation from distributing opaque directory covers with names and numbers of local tradesmen printed on them. National sold to tradesmen the privilege of being listed on these covers and distributed them by mail gratuitously.

Trespass Asserted

New England Telephone, asserting title to the directories, contended that it was entitled to enjoin a trespass on its property which would adversely affect telephone service. The evidence, however, did not bear out any interference with the company's service. Three errors which appeared in the telephone numbers on the covers were suggested as an interference, but they had been promptly corrected and there was no proof that they caused any difficulty. Nor was there any noticeable interference with service resulting from the concealment of service instructions on the outside of the telephone book.

It is unimportant, said the court, that the company retains title to the directories, if in fact it does. It was pointed out that even if a telephone company does not abandon bare legal title to its directories, the subscribers have such present rights to use them that any claim of the company to injunctive relief against the use of covers must rest on principles of contract or unfair competition. Injunctive relief based on trespass would require a showing of physical harm to a chattel. No such harm was shown here.

Tariff Inapplicable

The company also contended that the covers were prohibited by its filed tariff. The tariff prohibited customers from using, in connection with the equipment or facilities furnished by the company, "any electrical or mechanical apparatus or device" not approved by the company, and also prohibited the attachment of "any advertising devices."

The court ruled that these provisions applied only to the actual mechanical and electrical system and not to directories. The tariff created no contract between the company and its subscribers not to use covers on directories. This view was adopted the more readily in order to avoid questions of the validity of the tariff on statutory and constitutional grounds. It was observed that questions of reasonableness might well be presented by a tariff requirement that subscribers agree (as a condition to receiving a monopolistic service) not to use covers such as those furnished by National. Such a requirement, said the court, could be designed only to further a private advertising interest of the telephone company.

No Unfair Competition

In claiming a right to injunctive relief, the telephone company asserted that the advertising scheme constituted unfair competition.

The usual type of case for equitable relief against unfair competition involves a "passing off," or an attempt by one business competitor to deceive the public into thinking it is buying another's products or dealing with another. The evidence showed affirmatively that this was not the case with respect to National's distribution of covers.

The telephone company claimed that National attempted to appropriate values created by the utility. But National was not selling as its own any information or work product which the telephone com-

pany had created, the court observed. All that was being supplied was a convenient accessory for use with telephone directories which, as a part of a regulated public service, the company is required to furnish to its subscribers. The fact that the company has a protected and necessary monopoly in furnishing telephone service, said the court, does not mean that it can prevent the use of accessories in ways which are privately beneficial without being publicly detrimental.

At most, National gave telephone subscribers an opportunity to deprive the telephone company of a minor portion of its potential audience. Without the covers, the advertising or other display on the outside of the telephone book could be more fully viewed. But such an audience is not to be regarded as a captive one, subject to exclusive rights of the utility.

In considering whether in a novel area equitable relief against unfair competition should be granted, consideration must always be given to the public interest in preventing the creation or extension of monopoly. To grant an injunction in the instant case would lead to an undue extension of the telephone company monopoly, the court stated. *New England Teleph. & Teleg. Co. v. National Merchandising Corp. et al. 141 NE2d 702.*

New Jersey Commission Refuses to Normalize Tax Stemming from Accelerated Depreciation

A WATER company argued, before the New Jersey commission, that for rate case purposes a normalized income tax should be considered rather than the estimated actual income tax, since the tax benefits amounted merely to a deferral of taxes. To do otherwise, argued the company, would be contrary to the congressional intent of providing capital funds.

The company had benefited from tax savings due to the accelerated depreciation adopted in accordance with § 167 of the Internal Revenue Code. The commission carefully considered the company's claim but was of the opinion that the arguments were not so compelling as to warrant a different treatment than that which it had consistently followed in rate cases where the depreciation for income tax purposes was different from that recorded on a company's books. An adjustment in *pro forma* operating income was made to reflect the actual tax paid.

Rate Case Expense

In calculating rate case expense, the company had combined the cost of the present rate case and the unamortized portion of a 1952 case. Only the cost of the current rate case was considered, since the purpose of normalization is to reflect the amortization of current expense. The company's proposal of a 5-year amortization period appeared reasonable.

The increased rates would produce a return of 5.9 per cent, which the commission considered fair. *Re Commonwealth Water Co. Docket No. 9727, May 8, 1957.*

Combined Billing Denied to Apartment Development

REVERSING a lower court decision, the United States court of appeals ruled that the city of Anchorage, Alaska, properly refused combined billing for municipal electric service to two apartment house developments. Although the hous-

ing companies operated a number of apartment houses as single enterprises and on single tracts of land, the city billed each apartment house individually. This resulted in considerably higher charges than combined billing would entail.

The city's electric rate schedule provided for individual billing of "professional, mercantile, industrial, and other establishments . . ." The crucial question was whether "establishments" meant each apartment house or the group of apartment houses operated by each company. The rate schedule itself was not challenged; only the propriety of its application was questioned.

It was held that the city had properly construed the word as meaning each apartment house. The court said "establishment" should be taken in its ordinary sense; that is, the sense in which the lay person would ordinarily use it, nothing appearing to the contrary in the ordinance. The practical construction placed upon a rate ordinance by a city is entitled to great weight on appeal where there is no showing that its construction is unreasonable or that the rates under the interpretation are arbitrary or discriminatory, according to the court. *City of Anchorage v. Richardson Vista Corp. et al. 242 F2d 276.*

Fair Value Determination Upheld

IN upholding the commission's modified rate increase for a telephone company, the Montana supreme court reaffirmed a previous position that neither the commission nor the utility is limited to or bound by any particular method in arriving at the solution of the question of value.

The statute providing that the value of the property of every public utility actually used and useful for the convenience of the public shall be determined was held to mean present fair value.

In arriving at its decision, the commission had gone into all the methods of valuation presented to it: reproduction cost new and less depreciation; original cost; original cost depreciated; and assessment rolls. The commission is to be allowed a wide discretion, said the court, and is not bound by any specific formula for arriving at fair value. The only requirement is that fair value be found and used as the base in fixing rates. The trend today is to permit the commissions to exercise their discretion in establishing a proper rate base, and, so long as there is evidence to support the findings, the courts will not interfere.

Uniform Separations Method

The intrastate allocation was claimed to be unfair and discriminatory against the intrastate customer. The company's operation was both intrastate and interstate. The method of separating properties, revenues, and expenses between the systems was based upon the uniform separations method prescribed by the joint action of the National Association of Railroad and Utilities Commissioners and the Federal Communications Commission.

The Montana commission, pointed out the court, is a member of the national association and participated in the preparation of the system. The court saw nothing wrong with the uniform system. No alternative method for producing better results had been shown.

Revaluation

Appellants had contended that it was incumbent upon the commission to make an investigation of its own before author-

izing a rate increase. The commission had hired a certified public accountant to investigate and audit the company's books. His report had advised the commission that the financial exhibits of the company were accurate and truthful.

The statute authorizing the commission, in its discretion, at any time and of its own initiative to make a revaluation of utility property, held the court, does not require the commission to make an investigation of its own before authorizing a rate increase. The commission need not make such investigation if satisfied that the increase is necessary with the proofs submitted to it in support of the application. *Montana ex rel. Olsen v. Montana Pub. Service Commission, 309 P2d 1035.*

Interim Rate Relief Denied for Failure of Proof

THE California commission denied interim rate relief to Southern Counties Gas Company of California. The company sought permission, pending the completion of a regular rate proceeding, to continue charging winter rates which were scheduled to be discontinued in favor of lower summer rates. All pertinent evidence had not yet been submitted in the regular rate proceeding.

The company calculated that continuance of the winter rates would produce a rate of return of slightly over 5 per cent. The staff computed the rate of return under such rates as 5.56 to 6.04 per cent, depending on the tax treatment. This evidence indicated no financial emergency.

Continuance of the winter rates, said the commission, would amount to a rate increase.

It was observed that regulation does not guarantee a net profit to a utility, and before a company is entitled to a rate increase it must meet the burden of proof justifying the increase. It cannot sustain that burden until all pertinent evidence has been received by the commission. *Re Southern Counties Gas Co. of California, Decision No. 54852, Application No. 38211, April 16, 1957.*

Gas Rate Increase for Industrial Service Allowed on Cost-of-service Grounds

THE Arkansas commission authorized the Fort Smith Gas Corporation to increase rates to industrial consumers to the full amount requested. The commission found that the company was furnishing gas to industrial customers at a cost per Mcf (based on a 6 per cent rate of return) above the amount which the proposed rates would produce. That is, even with the proposed rates, revenues from industrial customers would still not meet the cost of service.

Only on the issue of cost of service did protestants attack the proposed rates. They sought to show that the cost of purchased gas was too high. Actually, the company obtained 97.3 per cent of the gas here involved from an interstate producer at a contract price of 12.78 cents per Mcf. Noting that the Federal Power Commission had jurisdiction over the producer's selling price, the state commission rejected evidence as to its reasonableness. It was observed, moreover, that prior to the federal commission's taking jurisdiction over producers, the Arkansas commission had found that this purchase price was reasonable.

The commission indicated that it still adhered to its earlier determination.

The remainder of the gas furnished to industrial customers was purchased from an intrastate producer at a cost of 20 cents per Mcf. This cost was also attacked by protestants. Although the commission recognized fair field value as controlling, it noted that even if this cost were excessive, the excess would not be sufficient to make up the difference between the amount produced by the proposed rates and the higher actual cost of service. Similarly, a contention respecting materials and supplies, if sustained, would reduce the cost of service only insignificantly.

Clarification As to Interruption

To avoid any misunderstanding with respect to the priorty rights of various customers, the commission required the company to clarify its filed schedule by expressly providing for interruption of service to industrial customers when the need is indicated. A schedule was also required to be filed setting forth the order of curtailment. *Re Fort Smith Gas Corp. Docket No. U-1169, May 17, 1957.*

Wage Boost Recognized in Rate Increase but Claim for Capital Needs Rejected

In a reopened proceeding the Nevada commission granted the Bell Telephone Company of Nevada most of a requested intrastate rate increase. The request for an increase was precipitated by an increase in wage expense following recent collective bargaining. Also, the company sought to show that it had not realized sufficient revenues to earn at the level previously authorized. In the original proceeding in August, 1956, the commission approved rates sufficient to afford a rate of return of 6.03 per cent.

Capital Needs Cited

The company testified to the sharp growth in the population of Nevada and the necessity for expansion of telephone facilities to meet demand for service. In the 1956 hearing it appeared that the company would spend between four and five million dollars a year for construction in 1957 and 1958, though much of it would be for interstate operations. The commission indicated that there was no apparent connection between the population demands of the people of Nevada and the expenditures of the company for improvements to satisfy these demands. With respect to testimony on the tight money market, the commission noted that the company obtained its money from Pacific Telephone & Telegraph Company at 3½ per cent interest.

Revenues and Rate Base Changes

The commission found that the company's interstate revenues had recently increased considerably more than intrastate revenues. Interstate and intrastate operating expenses had recently changed also. The commission indicated that a more detailed separations study should be made in order that intrastate operation may not be sacrificed for the benefit of interstate operation.

Cash working capital was disallowed in view of tax accruals. A claim for materials and supplies was denied to avoid a duplicate charge for this item. It was noted that materials and supplies were being charged out as additions to plant when used in installation and repair. Also, plant held for future use was rejected as a part of the rate base since present ratepayers should not be charged for

plant which is not used and useful to them.

While the commission found that the newly authorized rates would produce a reasonable return on the company's investment, it made no finding as to a specific rate of return. Neither was a rate base specified. *Re Bell Teleph. Co. of Nevada, I&S Docket No. 178, reopened as I&S Docket No. 186, May 3, 1957.*

Merger of Subsidiary Companies Approved

THE Securities and Exchange Commission approved the merger of six electric utility subsidiaries of New England Electric System, a holding company. It found that the merger would tend towards the economical and efficient development of an integrated public utility system as required by § 10 of the Holding Company Act. Each of the constituent companies is a Massachusetts corporation furnishing electric service in the northeastern part of the state.

Corporate Simplification and Integration Standards

The merger was proposed in furtherance of the policy of New England Electric System to merge its electric utility subsidiaries so as to have larger and more efficient subsidiaries. The constituent companies operate in contiguous and closely related geographical areas. The commission concluded that the resultant company would provide a more suitable and economical vehicle for future financing and would be able to effect operating economies and render improved service. It was found that there would also be savings in purchased power demand cost by reason of the diversity in the respective peak demands of the constituent companies.

Fairness to Stockholders

The commission observed that while the primary effect of the proposed merger would be on the common stockholders of the constituent companies, there would also be a slight effect, of a beneficial nature, on the holders of the debt securities of the companies. Their financial position would be slightly improved since the earnings coverages of the interest requirements on their securities would be increased.

With respect to the treatment accorded the common stockholders of the constituent companies the treasurer of the holding company testified that the exchange ratios were determined after giving consideration to the past and anticipated future earnings and dividends, market values, net worth, capitalization ratios, stability of earnings, and expected growth. The greatest weight, however, was given to past and anticipated future earnings.

The *pro forma* net income applicable to the respective amounts of stock of the resulting company to be received by the stockholders of the constituent companies was greater in each case than the net income applicable to their present respective shareholdings. The commission concluded on the basis of the entire record that the proposed exchange ratios were fair both to the holding company and to the minority stockholders of each of the constituent companies.

Voting Power Distribution

Upon consummation of the merger the holding company would own 80.55 per cent of the stock of the resulting company, with the public owning 19.45 per cent. The commission noted that it has

previously held that a publicly held minority interest in the common stock of a subsidiary in a holding company system, which subsidiary is engaged in intrasystem transactions with other subsidiaries, all of whose common stock is held by the holding company, constitutes an inequitable distribution of voting power in violation of § 11(b)(2) of the act. But the commission pointed out that the holding company is aware of this and has given a commitment to correct this situation. Consequently the commission made no adverse findings with respect to this.

State Commission Approval

Ordinarily the commission will not consider any proposal relating to a merger of public utility companies until a state commission having jurisdiction over them has first granted its approval. In this case, however, under Massachusetts law, no merger of public utilities may be effected unless the approval of two-thirds of the stockholders of each constituent company has been obtained. Moreover, the merger must also be approved by the department of public utilities, and no application for approval of the merger by the state commission may be filed until after the necessary stockholder approval has been obtained.

Since the holding company did not hold the requisite two-thirds interest in one of the subsidiaries, it was proposed to solicit the public stockholders of that company to obtain the necessary approval. Under § 11(g) of the Holding Company Act, no solicitation material regarding the merger may be transmitted to any security holder unless the solicitation material is accompanied or preceded by a copy of the commission's report or its findings and opinion relating to the merger. Consequently, it was advisable in this case to act upon the proposed transactions in advance of state commission approval. *Re Amesbury Electric Light Co. et al. File No. 70-3549, Release No. 13480, May 23, 1957.*

Security Issue Approved Despite Failure of Proof

THE New York commission authorized a telephone company furnishing service in New York and Pennsylvania to issue common and preferred stock despite the company's failure to meet the burden of proof. Observing that it would be fully justified in denying the petition for that reason, the commission said that such action, however, would only result in the delay of further proceedings. It believed that every effort should be made to dispose of the matter on the basis of the present record, in so far as possible.

The purpose of the new securities was to discharge current notes and bank loans through issuance locally of common and preferred stocks preparatory to arranging additional financing for the prospective conversion to dial operation. It was pointed out that while the company's balance sheet seemed to show an ample margin for the issuance of the new stock, a telephone corporation may, under § 101 of the Public Service Law, issue securities only when authorized by the commission "for the acquisition of property, the construction, completion, extension, or improvement of its facilities, or the improvement or maintenance of its service within the state, or for the discharge or lawful refunding of its obligations or reimbursement of moneys actually expended from the income" for such purposes.

While the company's telephone plant accounts were segregated by states, the as-

sociated depreciation reserves were not. Furthermore, the only testimony in support of the company's figures was that they were correctly transcribed from the books and records of the company. There was no evidence that the books and records correctly showed the cost of the company's property, either in total or within New York state.

Conditions Imposed

The evidence did indicate that at least part of the outstanding short-term loans were used in New York state. Although the company had not done so in the present record, it was deemed quite possible that it could show that a sum at least equal to the amount of preferred stock being issued had been expended on New York state plant. The commission believed that the company should be required to deposit the proceeds of the preferred stock in a special fund from which they might be released from time to time upon certification that the amount withdrawn was equivalent to the excess of the reasonable original cost of telephone plant to be constructed or previously constructed in the state, over the related accrued depreciation.

While the proposed issue of common stock had been subscribed, the company proposed to sell the preferred stock locally on a "do-it-yourself" basis. The record left considerable doubt as to whether that issue could actually be sold in such manner.

If only a small amount were sold, it would hamper the arranging of other financing which would then be necessary. The commission provided, therefore, that the proceeds be held in a special fund for the possible redemption of the stock already issued until such time as a substantial proportion of the proposed issue has been successfully marketed. *Re The Big Eddy Teleph. Co. Case 18203, June 4, 1957.*

Basic Facts as Foundation for Ultimate Facts Not Required of Commission

On appeal from a commission decision granting a certificate of public convenience and necessity which permitted a trucking company to engage as a common carrier in the transportation of oil drilling equipment, the Nebraska supreme court held that the record supported the commission's findings and order. The applicant showed that the proposed service would fulfill a useful purpose responsive to public demand or need. That the need could not be served by existing carriers had been satisfactorily proved. The commission had given proper consideration to the effect of service upon existing carriers.

Sufficiency of Findings

Appellants had asked the court to require a finding of basic facts in the commission order as a foundation for the finding of the ultimate fact required by statute. Because of the absence of a finding of basic facts, the commission's order was claimed to be void.

Appellants relied upon the Saginaw Broadcasting case ([1938] 68 App DC 282, 96 F2d 554, 559), which the court proceeded to examine. The court in that case, in discussing the necessary content of findings of fact, spelled out the process which a commission followed in reaching a decision.

The process necessarily included at least four parts: (1) evidence had to be taken and weighed, both as to accuracy and credibility; (2) from attentive considera-

tion of such evidence a determination of facts of a basic or underlying nature had to be reached; (3) from such basic facts the ultimate facts, usually in statutory language, had to be inferred, or not, as the case might be; (4) from such finding the decision would follow by the application of the statutory criterion.

The court had held that findings of fact, to be sufficient to support an order, had to include the basic facts, from which the ultimate facts were inferred.

The court in the present case, however, referred to Antioch Milling Co. *v.* Public Service Co. of Northern Illinois (1954) 123 NE2d 302, 8 PUR3d 169, in which the Illinois supreme court refused to set aside an order where specific findings of fact had not been made, there being no statute requiring such findings.

In the instant case, the court could find no Nebraska statute that required the finding of basic facts. In the Saginaw case, the court had held that a decision, unaccompanied by findings of fact, would hamper the function of the reviewing court because it would not be able to determine whether the conclusion reached by the commission followed as a matter of law from the facts stated as its basis, and also whether the facts so stated had any substantial support in the evidence.

A reviewing court, it had been pointed out in the Saginaw case, could not properly exercise its function upon findings of ultimate facts alone, but required also findings of the basic facts which represented the determination of the administrative body as to the meaning of the evidence. Here, the Nebraska supreme court stated, no such difficulty in reviewing the record on appeal had been encountered.

The Nebraska court declined to undertake to place such a requirement on the commission. *Ferguson Trucking Co., Inc. v. Rogers Truck Line et al. 81 NW2d 915.*

Transit Company Reorganization Plan Approved

THE Maryland commission approved a plan of financial reorganization of the Baltimore Transit Company as being beneficial, practical, and feasible. Under the plan, each share of outstanding preferred stock would be replaced by one share of $1 par value common stock and $30, principal amount, of 6¾ per cent 20-year cumulative income debentures.

The latter would be expressly subordinated to the company's outstanding Series "A" debentures. Holders of 73.89 per cent of the preferred stock and 84.93 per cent of the common stock had approved the plan.

The outstanding preferred stock had a par value of $50, a liquidation value of $51.25, and a redemption price of $52.50. On the basis of such amounts the resulting asset values of each share of common stock were about $5.81, $5.65, $5.49, respectively. Under the new reorganization plan, the new debentures would have a principal amount of $30 and an initial redemption price of $33. Based on such amounts the resulting asset values of the common stock would be about $7.42 and $7.08, respectively.

Resulting Savings

A saving of $187,000 was anticipated as a result of the plan. This was derived from a gain of $56,000, by substituting $223,000 as interest on the proposed subordinated debentures for $279,000 dividends upon the preferred stock that would be retired under the plan, and a tax

saving of $131,000 resulting from tax benefits applicable by the substitution of payments of interest on the proposed debentures instead of payments of dividends on the existing preferred stock.

The commission concluded that these savings would be of material benefit and assistance to the company in maintaining a sound financial structure. Furthermore, the public would be benefited by having service rendered by a company with an improved financial condition and one which would be better able to maintain and improve its service in the future.

The resulting savings were deemed to be the equivalent to net income to the company that would be produced by additional gross revenues of $470,000 or the equivalent in net income by reducing expenditures in the amount of $456,000. *Re Baltimore Transit Co. Case No. 5517, Order No. 52887, June 5, 1957.*

Increased Operating Costs Drive Telephone Rates Up

In fixing exchange rates for a small telephone company, the Wisconsin commission allowed a rate of return of 6.5 per cent on a net book value rate base. Requested rates, which the commission found would produce a rate of return of 7.15 per cent, were considered excessive. Existing rates yielding 3.24 per cent were deemed inadequate. Increased operating costs, particularly labor expense, were cited as necessitating additional revenues.

Several expense adjustments were made to the figures submitted by the company. Some labor costs which would be charged to construction accounts were excluded from operating expenses. A rate of 2½ per cent claimed for state unemployment insurance was found to be excessive and reduced to one per cent of applicable payroll. It was not certain that the higher rate would in fact be applied, and if it were, it would be for only a relatively short time. *Re Union Teleph. Co. 2-U-4758, May 31, 1957.*

In another case involving a small telephone company, the commission approved proposed rates calculated to produce a rate of return of 6.3 per cent. *Re Cecil Green Valley Toll Line Co. 2-U-4783, May 29, 1957.*

Other Recent Rulings

Obligation to Render Electric Service. The Colorado commission held that an electric company, having once rendered service to certain customers, could not discontinue the service merely because it did not control a line owned by a third party. *Wardell et al. v. Moon Lake Electric Asso., Inc. Case No. 5130, Decision No. 47716, April 11, 1957.*

Waiver of Court Jurisdiction. The Oklahoma supreme court held that the question of jurisdiction is primary and fundamental in every case, and cannot be waived by the parties or overlooked by the court. *Bestway Freight Lines, Inc. v. Sooner Freight Lines, 308 P2d 959.*

Equalization of Rates. The Washington commission authorized a 5 per cent general freight rate increase for the intrastate operations of all railroads, which conformed to the 5 per cent interstate increase granted by the Interstate Com-

merce Commission, upon a showing that, despite increases in employee efficiency and refinements in the art of railroading, increased wages, payroll taxes, cost of materials and supplies, and rental rates of private tank cars necessitated additional revenue in order to maintain operations at present standards and avoid undue and unjust discrimination against interstate commerce. *Re Intrastate Rail Freight Rates and Charges, Cause No. T-9250, April 19, 1957.*

Rail Passenger Fares Go Up. The Massachusetts commission approved a 45 per cent increase in a railroad's first-class intrastate passenger fares, placing them on a level with new interstate fares in the jurisdiction, though the railroad would still experience a loss on such operations. *Re Boston & Albany Railroad (New York C. R. Co., Lessee) DPU 12076, May 7, 1957.*

Violation of Transfer Agreement. A Missouri court ruled that the proposed transferee of a bus company's certificate and assets had violated his contractual obligation to seek commission approval of the transfer, by failing to take effective action to lift the suspension of another certificate which he held, where the commission, within its proper authority, required the two certificates to be consolidated upon transfer and finally disapproved the transfer because of the suspension. *Schulte Transp. Co., Inc. v. Hewitt et al. 299 SW2d 568.*

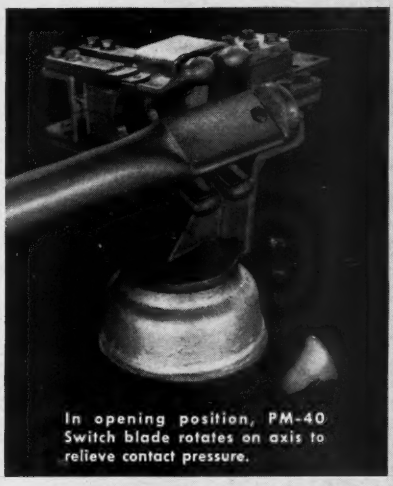
Electric Utility Purchased. Virginia Electric & Power Company secured authority from the North Carolina commission to purchase and operate the facilities of Roanoke Utilities Company, Inc., serving in the town of Manteo and on Roanoke Island, upon a showing that Vepco, being in a stronger financial and experimental position, would provide better service at a considerably lower cost to consumers. *Re Virginia Electric & Power Co. Docket No. E-22, Sub 34, May 8, 1957.*

Finding of Inadequacy. The United States district court held that the legality of an Interstate Commerce Commission order authorizing a motor carrier to expand existing operations was not affected by the lack of a finding that present service was inadequate. *Dance Freight Lines, Inc. v. United States et al. 149 F Supp 367.*

Gas Certificate Granted. The California commission authorized a gas company to construct facilities and serve an area at rates then in effect in the company's adjacent territory upon a showing, among other things, of an estimated rate of return of 5.3 per cent for the first year of operation and 6.5 per cent for the third year. *Re Southwest Gas Corp. Decision No. 54842, Application No. 38678, April 16, 1957.*

Dedication to Public Use. In deciding that a golf club furnishing water to its members was not a water utility, the California commission observed that in order for an enterprise to constitute a public utility there must be a clear and unequivocal dedication to a public use; nor is such dedication to be presumed; it must be based upon evidence of unequivocal intention or other act which legally results in dedication. *Teverbaugh, M.D., et al. v. Contra Costa Golf Club, Decision No. 54883, Case No. 5847, April 22, 1957.*

PM-40 Double-Side-Break Switch features easy-rotating blade, high pressure silver-to-copper contacts, factory-sealed insulator bearing, and heavy duty construction. Voltage ratings, 115 to 330 KV; 600 to 1600 amperes.



In opening position, PM-40 Switch blade rotates on axis to relieve contact pressure.

In closing position, PM-40 Switch blade moves from 45° to 90° angle to lock easily and securely.

ere's easy, positive operation with elta-Star's PM-40 Side-Break Switches

he ease of operating Delta-Star's PM-40 Double-ide-Break starts with its engineered simplicity. The otating blade operates by over-toggle mechanism on enter rotating insulator. Balanced spring arrange-nt reduces operating effort when switch is opened r closed.

The simplified blade-actuating mechanism exerts ough power to easily break ice or corrosive forma-ns—assuring ease of operation at all times.

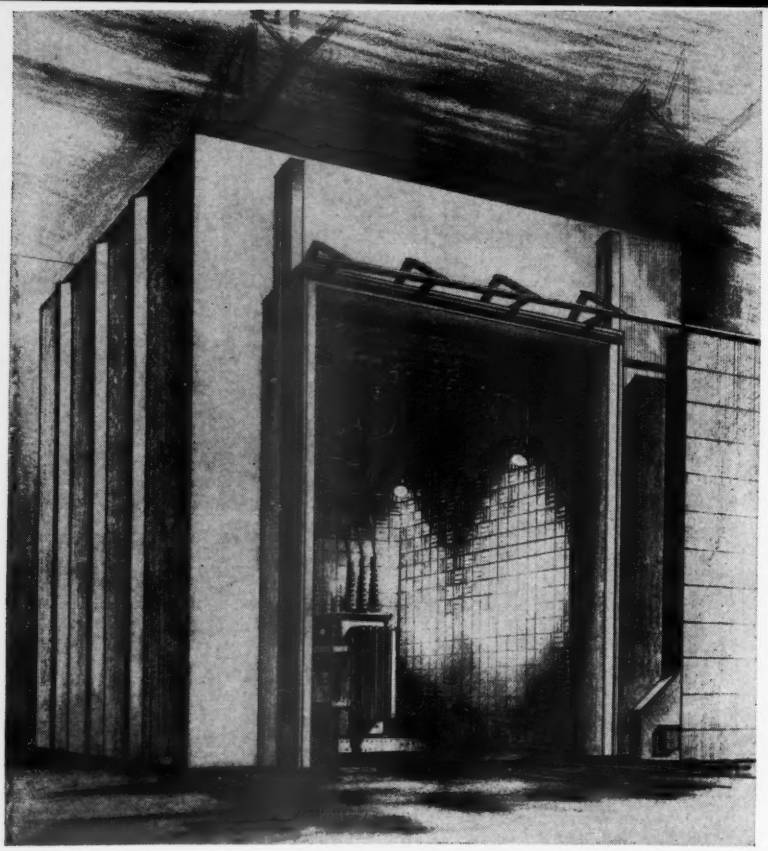
PM-40 contacts are straight-line current path de-sign with no offset to produce stress during fault currents. Tubular switch blade is one-piece, hard-drawn copper, with silver inlay contact points. The blade rotates on a factory-sealed, ball-bearing base.

Where you prefer or require side-break switches in voltage ratings of 115 to 330 KV, the Delta-Star PM-40 definitely deserves first choice consideration.

Call Delta-Star Electric Division,
H. K. Porter Company, Inc., Chicago 12, Illinois.
District offices in all principal cities.

DELTA-STAR ELECTRIC DIVISION
H. K. PORTER COMPANY, INC.

Divisions of H. K. Porter Company, Inc.: Connors Steel, Delta-Star Electric, H. K. Porter Company (Canada) Ltd., Henry Disston, Leschen Wire Rope, Quaker Rubber, Refractories, Riverside-Alloy Metal, Vulcan Crucible Steel, W-S Fittings.



VERY "HUSH HUSH

The new Westinghouse Anechoic Vault recently dedic at its Sharon, Pennsylvania transformer laboratory is equiv in size to a five-story building, with walls five feet thick a 150-ton door.

As Westinghouse stated—"Here the biggest transfor to be built in the foreseeable future will be tested for nois duction."

Engineers at Commonwealth Associates Inc. were sponsible for the structural and acoustical enginee design for this Westinghouse project.

COMMONWEALTH SERVICES INC.

New York, N. Y. Jackson, Mich. Washington, D. C. Houston, Tex.

300 PARK AVENUE, NEW YORK 22, NEW YORK

COMMONWEALTH ASSOCIATES INC.

The Commonwealth Professional Engineering Organization

FINANCIAL
RATES
INSURANCE
PURCHASING
GAS OPERATIONS
CORPORATE
PENSIONS AND WELFARE
BUSINESS DEVELOPMENT
INDUSTRIAL RELATIONS
PUBLIC RELATIONS
STOCK TRANSFER
PROXY SOLICITATIONS
GENERAL CONSULTATION
ENGINEERING—
CONSULTING AND DESI

TAXES
DEPRECI
ACCOUN

Industrial Progress

ntral Illinois Light to Build $26,000,000 Plant

TRAL Illinois Light Company ly announced plans for a $26,-00 steam-electric power plant to uilt at a new location on the is river south of Peoria. The nit as planned will be 125,000 atts and is scheduled for opera-n 1960.

e new unit will be of the latest type and will operate at a steam ure of 1,800 lbs. per square inch temperature of 1,000° F. with to 1,000° F.

e company is now completing a 00 kilowatt addition at the R. S. ce station at East Peoria, for e late in 1957.

e company's construction pro- for 1957 and 1958 is estimated roximately $42,400,000.

EE Honors Eight Members h Award of Highest Grade

American Institute of Electrical eers (AIEE) has announced ight members have been raised grade of Fellow—the Institute's st grade.

EE, the world's largest engineer-ciety, awards the grade of Fel- members who have served with tion in the electrical engineer-rofession.

vated members and their cita-are:

rge W. Baughman, vice-presi- Union Switch and Signal Divi- f Westinghouse Air Brake Com- Swissvale, Pa., "for his con-ions to the design and applica- of railway signaling control ns."

fford A. Duke, chief, Electrical atory and Test Branch, Ten- Valley Authority, Chattanooga, , "for his contributions to the ization of a testing laboratory and staff for a large power system."

John Grotzinger, manager, Electrical Engineering Division, Goodyear Tire & Rubber Company, Akron, O., "for his contributions to the technology of power systems and power supplies for a large industry."

Marshall McKoch, vice-president, electrical operations, Public Service Company of Colorado, Denver, "for administrative achievements in directing the engineering, construction and operation activities of a rapidly expanding utility system."

Carlisle K. Milner, vice-president, The Ohio Bell Telephone Company, Cleveland, "for his contributions to executive and technological leadership of a communications enterprise."

Harold L. Rorden, high-voltage practice engineer, American Gas and Electric Service Corporation, New York, N. Y., "for his contributions to control of lightning and surges of power transmission circuits."

Clifford L. Sampson, vice-president, operations, Northwestern Bell Telephone Company, Omaha, Nebr., "for excellent performance in directing engineering, construction and operations in a large operating communications utility during a period of rapid expansion."

Randall B. Shipley, electrical engineer, Tennessee Valley Authority, Chattanooga, Tenn., "for originality in the use of mathematical methods for the solution of complex electrical transmission system problems."

General Electric Announces New Line of Power Transformers

A new line of power transformers with significant improvements and benefits has been announced by General Electric's power transformer department at Pittsfield, Mass. The transformers, called "Preferred Design," incorporate great electrical flexibility with mechanical features and accessories chosen only after an extensive survey revealed the preferences of a majority of utilities. The new transformers can be built in any rating from 5,000 to 50,000 kva.

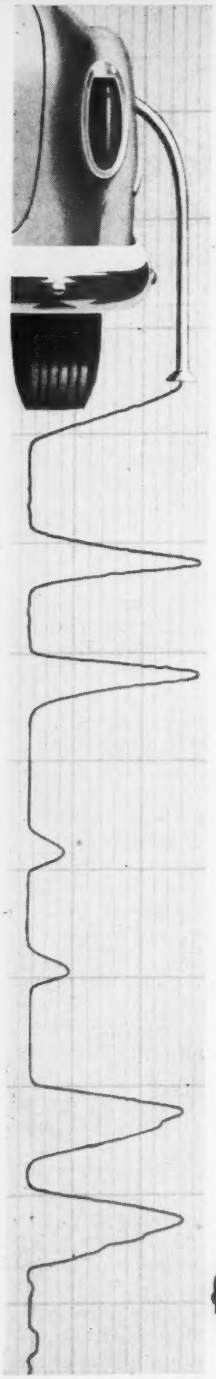
"We can deliver Preferred Design transformers six to 12 weeks faster," said J. B. Monk, manager of power transformer sales. "Drawings approved for construction purposes will be furnished with every proposal. To assist utility planners, advance information on dimensions, weights, and operating characteristics for representative PD units will be available."

The line includes three-phase OA, OA/FA, OA/FA/FA, and FOA cooled units, with and without load tap changing, at voltages of 69, 115, 138 Kv. In addition to the mechanical features preferred by a majority of power transformer users, PD transformers will have an improved base design for easier handling, better grouping of cooling equipment for greater accessibility, and, on units above 12,000 Kva, a new control cabinet to house controls and indicators.

Delivery on PD transformers will range from 10 to 19 weeks, compared to 16 to 31 weeks for other units, Mr. Monk continued. The use of a 705 electronic data processing machine has speeded the design process where, for example, certain reactance calculations can be done 3,800 times faster than by hand methods, and complete transformer designs take minutes instead of weeks.

The unprecedented calculating ability of the computer will contribute to better transformers, Mr. Monk said. Previously, engineers had time to consider only a relatively few alternate designs. Using a convergent iterative process, it is now practical with the 705 to determine the optimum design for a customer's application.

(*Continued on page 26*)



Sample intake hose "sniffs" air two inches above pavement as vehicle moves. Inside the car, a graphic strip chart record is made—ratio: one division to 5 ppm methane.

Beckman Infrared Gas Analyzer

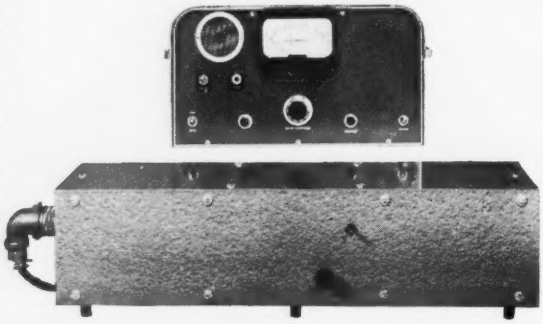
Pinpoints Gas Main Leaks

by measuring Methane-in-Air ...in Parts-Per-Million

Development of an economical and effective technique for detecting and locating subsurface gas leaks, has been reported by Consolidated Edison Company in New York. Utilizing a Beckman Infrared Gas Analyzer sensitized to methane, mounted in an automobile cruising 10-12 miles per hour, the company surveyed 2100 miles of street mains in a six-month test. Some 450 suspected leaks—points at which methane-in-air concentration was higher than 50 parts per million—were recorded, and practically all of them confirmed by bar hole testing and digging.

E. R. Thomas of Consolidated Edison Company reports that the method: *"has proved to be very effective in tracking down points of leakage from gas mains in a convincing and straightforward manner...an economical general survey method which can be used to cover an entire distribution system rapidly."*

Full details on the mobile Beckman Model 29 Infrared Gas Analyzer, for gas leak survey and many other uses in detection and measurement of toxic, explosive or irritating atmospheric gas concentrations, are available on request. Write for Fact File P-6-97.



"CALLS OUT" LEAK INDICATIONS—The Beckman Model 29 Infrared Gas Analyzer provides audible signal, through loudspeaker or headphones, when there are sudden changes in concentration of the gas being monitored. It operates on 6 volts at 8 amperes, is easily adaptable to 12-volt systems. The Model 29 can be sensitized to any of a wide range of industrial gases, and can detect a few ppm.

Beckman

Process Instruments Division
2500 Fullerton Road, Fullerton, California
a division of Beckman Instruments, Inc.

Fusion Research Program Announced by General Elec

SAFE and inexpensive power the fundamental process of th drogen bomb is the goal of a sci search that has been launched General Electric Research Lab ry.

A "substantial research prog to study the fusion process has underway at Schenectady, N. Y more than a year, according to a nouncement made before the I national Symposium on Science dustry and Education in Oklah City recently by Dr. Guy Suits, eral Electric vice president an rector of research.

"Fusion technology, as now ceived, employs the most basic nical skills of the electrical indu and it is inevitable that the ind will contribute heavily to this im tant development," Dr. Suits adding that he believes there appropriate place for both go ment and industrial research in s ing the peaceful use of the atom

However, the GE research tor cautioned his audience that has been "too much optimism in quarters" about fusion power even pilot-plant production of f power will not begin for tw years. In the meantime, he there is a clear rôle for power duction by the first-discovered ic-power process, fission.

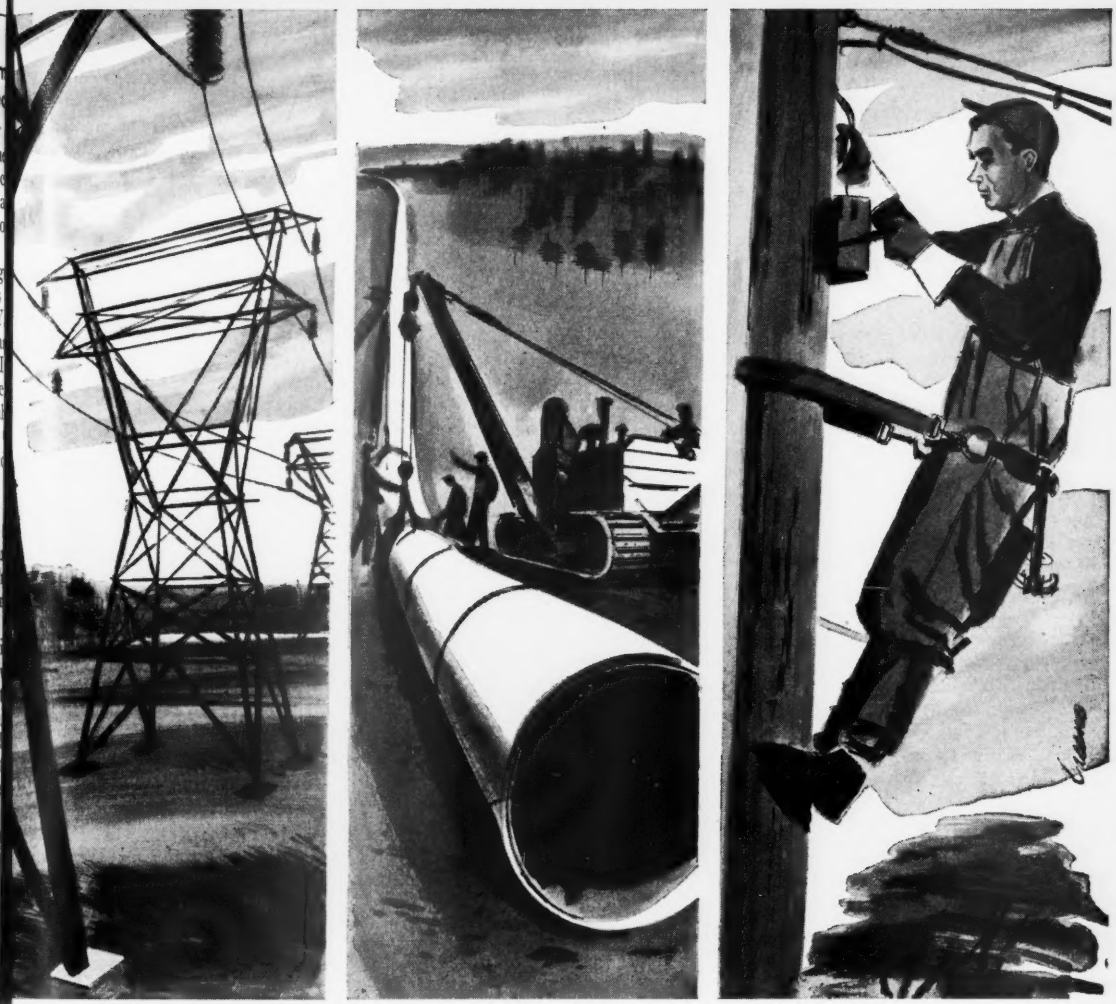
"In spite of the reservation should have about the length of it may take to realize the goal of tical power from fusion, at the eral Electric Research Labor we are convinced that the ult importance of safe and inexpe power from hydrogen makes sential for us to study the pro right now," Dr. Suits said.

Thus far, research on fusion been more productive of "hope power" but in the longer term cannot be denied and eventually luctant nature must be made to a controlled thermonuclear rea for energy generation, he said.

"My own view," Dr. Suits s "is that five additional years search will be required to make sible a realistic appraisal of the process; in ten years we may the point of technical feasibility lot-plant production of fusion will not begin for twenty years competitive power production li yond that."

During this period of disc and development, the producti

(*Continued on page* 28)



THE IRVING TRUST COMPANY SERVES VITAL INDUSTRY

service lines into the future...

Vast growth of the Utility Industry has had its share of financial complexities. However, close to the pulse of the financial world and to the Industry itself, our specialists continue to reach ahead with new and sound approaches.

Whether an undertaking of capital planning, financing, or cultivation of the financial community—our Analytical Studies, Seminars and Round Tables may prove valuable aids to your company's future.

For more information, call Public Utilities Department at DIgby 4-3500 or write us at One Wall Street.

IRVING TRUST COMPANY

One Wall Street, New York 15, N.Y.

Capital Funds over $125,000,000 — *Total Assets over $1,500,000,000*

RICHARD H. WEST, *Chairman of the Board* — GEORGE A. MURPHY, *President*

Public Utilities Department—JOHN F. CHILDS, *Vice President in Charge*

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

power by fission, which is technically feasible today, will rapidly become competitive with older energy sources, he predicted, adding that experience accumulated in producing atomic power by fission will be invaluable when fusion becomes practical.

Dr. Suits did not outline in detail the fusion program at the General Electric Research Laboratory except to say that it was "substantial," is expanding rapidly, has been in progress for more than a year, and is being headed by Dr. Henry Hurwitz, one of GE's top theoretical scientists.

"It would be presumptuous for me to compare the magnitude of our effort with that of the Atomic Energy Commission's famous Project Sherwood, but we do expect to focus the traditional skills of the electrical industry on this primarily-electrical problem. We do not yet have any results to announce publicly and, frankly, have no expectations of building fusion pilot plants in the near future," he said.

In emphasizing the need for perspective and balance in predicting the future of fusion, Dr. Suits reviewed the history of power-from-fission from the first demonstration of a chain reaction in 1942 to the scheduled beginning of practical atomic power production in 1960.

"It will have taken approximately 18 years to bring fission, as a technically-feasible new energy process, from Enrico Fermi's laboratory to a position where power from Commonwealth Edison's Dresden's station may begin to help light that historic room under the University of Chicago stadium," he said.

Even without the challenging goal of peaceful use of thermonuclear reactions, the scientific problem itself represents one of the most fascinating subjects ever faced by researchers in the physical sciences, according to Dr. Suits.

"To bring the temperatures of the stars into the laboratory for study is a dream that, until recently, few astrophysicists would have had the courage to express. Yet the work already reported gives considerable substance to this dream," he said.

"Perhaps the most important single concept so far is that of magnetic containment, making a magnetic 'bottle' that will hold a bit of cosmic plasma heated to 100 million de so that it will not touch—and diately destroy—the walls," Dr. said, explaining that this prob one where the basic skills of tists in the electrical industry be able to make significant con tions.

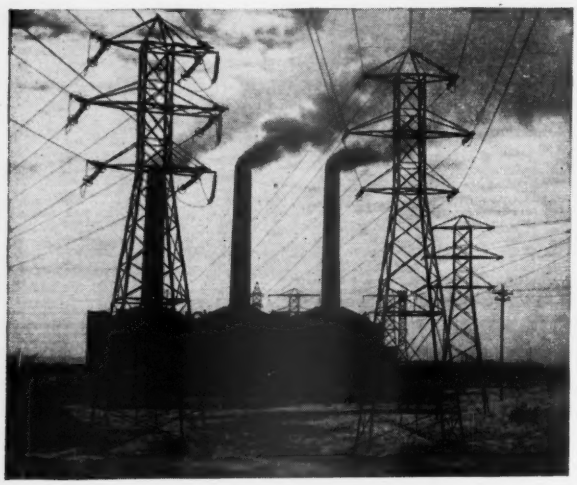
He indicated that magnetic tainment is one of several problems being tackled by G Electric scientists at Schenecta

"Just how to make the con still stumps the experts, and h fill the container is another problem to be worked out. B have a foot in the door, and sponse to what will eventuall come an overwhelming need, must, if at all possible, be ma yield a successful answer to th fort," he concluded.

Brown-Boveri Introduces Automatic Instant Synchro

BROWN Boveri Corporation nounces the introduction of a automatic instant Synchronize fast, automatic speed-matching

(*Continued on page* 30)



American Appraisals of reproduction cost may affect rates

An American Appraisal report of the cost of reproduction provides convincing evidence in the preparation of an appeal for adjusting rates to provide a more equitable return.

The AMERICAN APPRAISAL Company

Leader in Property Valuation
Home Office: Milwaukee 1, Wisconsin

More for your Money in MORYSVILLE

New Line Construction Body for single or dual wheel chassis from ¾ to 2 tons. Length from 8' to 14' (CA's from 48" to 120"). Sliding roof for derrick; ample stowage space inside and out. Many plus features at no extra cost.

- 14 and 16 ga. Body Steel (14 ga. throughout for models rated 1 ton up—19 ga. doors).
- ⅛" Diamond Floor Plate.
- 5" Structural Channel Understructure.
- Electric Welded throughout.
- Telescoping Roof with weather tight, easy sliding action.
- One piece Smooth Welded Drawers and Compartments.
- Vertical or Horizontal Flush Doors with recessed, spring loaded latches at no extra charge.
- Concealed metal Winch Box.
- Curbside Access to tools and equipment used most frequent
- Vertical Compartments for ers, lines and linemen's tools.
- Large, inside ventilated, Rubb Goods Compartment.
- Two piece Front Window in compartment.
- Bit and Chisel Drawer; Troug Drills, Tamps, Rods, etc.
- Fendix Undercoating at no ex charge.

IMMEDIATE DELIVERY • Distributors in Principal Citi

Distributors for HALL DERRICKS

MORYSVILL Body Works

813 SOUTH READING AVE., BOYERTOWN, PE

In actual road tests . . .

Dodge won top honors in test after test between comparable models of all three low-priced trucks. Special high-speed camera records actual finish of hill-climb test. From a standing start, test crews raced all three trucks up a 32% grade. Dodge was *first* by five lengths.

and on your job . . .

Dodge gives you more V-8 power, in every weight class, than either of the other two low-priced trucks. From 204-hp. pick-ups to 232-hp. tandems, the extra power you get in a Dodge means an on-the-job performance bonus for you. It means greater economy, too, because it cuts down engine strain, reduces wear and repairs.

Dodge *Power Giants* outpower, outperform the "other two" low-priced makes by wide margin!

power? Dodge outpowers its low-priced competi-y as much as 27 percent.

economical performance? The advanced design Dodge short-stroke V-8 produces the most efficient sage in the industry. You get more miles per gallon ull power on *regular gas.*

extra payload capacity and handling ease? Dodge m beat on both counts.

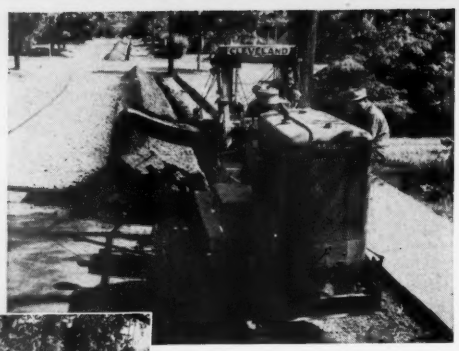
about it? Don't you think you should find out for lf? Just give your Dodge dealer a ring. He'll bring k right to your door and he'll show you certified sults that demonstrate Dodge is a winner in actual nd on your job.

DODGE

PowerGiants

MOST POWER OF THE LOW-PRICED 3

DIGS STRAIGHT



DIGS CLOSE

DIGS FAST

Etowah Construction Company uses its Cleveland 95's compactness and shiftable conveyor to advantage on this utilities job in Franklin, Tennessee.

The Cleveland 95 "Baby Digger"—built by the Pioneers of the Modern Trencher, originators of *every* important trencher design feature—makes money for its owners because it . . .

- ***fits more jobs***—digs to 5½' deep x 24" wide.
- ***digs all soils***—full-size engine, over 30 graduated power and speed combinations.
- ***digs faster***—more bucket capacity, more wheel-and-crawler combinations.
- ***saves property damage***—full crawlers, easy on lawns and sidewalks.
- ***lasts longer***—quality construction and materials mean longer life—it's in the records.

THE CLEVELAND TRENCHER CO.

20100 ST. CLAIR AVENUE • CLEVELAND 17, OHIO

Good Everywhere

synchronizing.

The announcement states tha instant synchronizer automat matches the speed of the genera the system. When the frequenc ference is .5 cycles or less (limits paralleling shock), the chronizer computes the proper time to activate the breaker so its contacts will make at the *instant* of phase coincidence . . paralleling occurs instantly wi the necessity of actually holding chronism.

The Instant Synchronizer us tubes or transistors, and under operating conditions, may remai up for hours without risk. Com information can be had by wr the manufacturer, Brown B Corporation, 19 Rector street, York 6, N. Y.

Billman Appointed Chief Engineer of C-D Power Factor Capacitor Division

CORNELL-Dubilier has annou the appointment of L. S. Billm chief engineer of its Power F Capacitor Division. Mr. Billman been with C-D for the past ten as design engineer and engine assistant to Wayne Steinbarge served as a Captain in the Arm Force during World War II, an fore that had been on the engine staff of the Consolidated Edison pany since 1931.

G-E Develops "Bouncing Microwave" System for El Paso Electric

THE nation's first comme "bouncing microwave" system achieve reliable communications a 40-mile distance by using mirror-like reflectors to relay i gence instead of regular repeater tions has been developed by Ge Electric engineers for El Paso tric Company.

Described by General Electr the longest reflected microwave in private industrial use in the U States, the system is designed t prove communications efficiency tween the utility company's fac at El Paso and Las Cruces. It is able of handling private conv tions, printed material and re control signals and will be us give information on the flow of er between El Paso Electric Co ny and interconnected companie

It will also provide more eff

(*Continued on page* 31)

visory control of the Las Cruces ation from the dispatcher's of- n El Paso. Primary use, how- will be to provide a protective- ng channel between El Paso ic Company and the adjoining anies on 115 K.V. tie-lines.

Releases New Distribution Transformer Bulletin

w 16-page bulletin. "Distribu- Transformers for Rural and In- al Substations" (75 through 500 7 kv and below, single phase), een released by Allis-Chalmers facturing Company.

e bulletin describes the materials arious production steps used in cing this type of transformer. cludes a complete summary of nts and dimensions along with e drawings, and EEI-NEMA standard accessories for the various sizes.

Copies of the bulletin, 61B6014C, are available on request from Allis-Chalmers Manufacturing Company, Milwaukee 1, Wisconsin.

New Film Catalog Available From Westinghouse

A new booklet titled "Westinghouse Sound Films" is available from Westinghouse Electric Corporation. The booklet is a catalogue of forty-seven general interest films, product information films, and training films available without charge from Westinghouse. Included in the booklet is a description of instruction courses available to electric utility companies.

For a copy of booklet B-7077 write Westinghouse Electric Corporation, P. O. Box 2099, Pittsburgh 30, Pa.

Reliable Electric Supply Vital For Process Industries

ELECTRIC utilities can supply the class of service required by the process industries, such as petroleum refineries and petrochemical plants, but cooperation of the utility and industrial plant planning engineers is necessary.

Such was the conclusion of H. L. Deloney and Jack Davey, of Louisiana Power & Light Company, in a paper presented recently at the Summer General Meeting of the American Institute of Electrical Engineers. Title of their paper was Meeting the Electric Service Requirements of Critical Process Industries.

Such industries, they pointed out, are usually highly automatic, and dis-

(*Continued on page 32*)

This announcement is not an offer to sell or a solicitation of an offer to buy these securities. The offering is made only by the Prospectus.

$70,000,000

Southern Bell Telephone and Telegraph Company

Twenty-Nine Year 5% Debentures

Dated June 1, 1957 Due June 1, 1986

Price 102.32% and accrued interest

The Prospectus may be obtained in any State in which this announcement is circulated from only such of the undersigned and other dealers as may lawfully offer these securities in such State.

HALSEY, STUART & CO. INC.

BEAR, STEARNS & CO. DICK & MERLE-SMITH

LADENBURG, THALMANN & CO. L. F. ROTHSCHILD & CO.

SALOMON BROS. & HUTZLER SHIELDS & COMPANY WERTHEIM & CO.

SCHOELLKOPF, HUTTON & POMEROY, INC. FRANCIS I. duPONT & CO.

WEEDEN & CO. INCORPORATED COFFIN & BURR INCORPORATED BACHE & CO. BAXTER & COMPANY

R. S. DICKSON & COMPANY INCORPORATED SHEARSON, HAMMILL & CO. F. S. SMITHERS & CO.

TUCKER, ANTHONY & R. L. DAY BAKER, WEEKS & CO. IRA HAUPT & CO.

HIRSCH & CO. E. F. HUTTON & COMPANY McDONNELL & CO.

NEW YORK HANSEATIC CORPORATION SHELBY CULLOM DAVIS & CO.

AUCHINCLOSS, PARKER & REDPATH BALL, BURGE & KRAUS

BURNS BROS. & DENTON, INC. GREGORY & SONS H. HENTZ & CO.

RITER & CO. STERN BROTHERS & CO. SWISS AMERICAN CORPORATION

VAN ALSTYNE, NOEL & CO.

June 19, 1957.

turbance of the electrical supply can be serious, while complete loss of power can cause havoc.

Lack of understanding among utility and process planning engineers "can result in costly improvised modifications and corrections of mistakes once the plant goes into operation," they said. "The electrical and mechanical equipment manufacturers also have a most important part to play in the selection of equipment since they are oftentimes more abreast of the latest developments in equipment, its adaptability and functions. They also stand ready to design and build new equipment for new functions as the need arises."

International Harvester Issues Catalog of Truck Accessories

A 12-page two-color "Necessories" catalog describing and illustrating tested and approved accessories for International trucks has been issued by the motor truck division of International Harvester Company. The accessories shown were selected as being necessary to the greater comfort economy, safety or convenience of truck operation. All have been tested and approved by the International truck engineering department. Catalog, form MT-93, can be secured by writing Consumer Relations Department, International Harvester Company, 180 N. Michigan avenue, Chicago 1, Illinois.

New Safety "Check List" Detects Explosion Hazards

TO locate the hidden probabilities of electrically ignited explosions in plants, a "Hazard Finder" is being made available by Crouse Hinds Company of Syracuse, N. Y.

This eight-page, illustrated folder contains a check list of 13 questions that can help you determine whether uncontrolled flammable gases, vapors, dusts, liquids and other combustible materials are making your plant unsafe. Part of the folder is sealed until all the questions have been answered. After the seal is broken, an evaluation of the hazard potential in your plant is revealed, based on your answers and the findings of the National Fire Protection Association.

For a free copy, write on your company letterhead to Hazard Finder, Dept. HF, Crouse Hinds Company, Wolf & Seventh North Streets, Syracuse, New York.

Black Hills Power, Rushmore G&T Dedicate Plant

Dedication of a new 16,500 KW unit was held June 13th at Black Hills Power & Light Company's Kirk plant near Lead, S. Dak. The unit, owned by Rushmore G&T Electric Cooperative and leased by Black Hills Power & Light, was installed at a cost of approximately $3½-million.

Construction was financed through the Rural Electrification Administration by Rushmore, with BHP&L contracting for installation. Under the agreement, Black Hills has leased the unit from Rushmore and will sell power to the cooperative for use by its six members. Excess capacity will be available to the power company for sale to its customers. A similar agreement was made by the two companies for a 10,000 kilowatt unit in the Osage, Wyoming plant of the power company in 1952.

Both Oliver G. Rose, president of Rushmore G&T and Neil Simpson, president of Black Hills Power & Light, expressed the view that "this type of partnership operation, though unique, has been of mutual benefit to Rushmore and Black Hills and has proved to be successful in all respects."

"Do-It-Yourself" Tour of Lower Colorado Hydro Dams

The Bureau of Reclamation has opened to the public its lower Colorado river powerplants at Davis and Parker Dams, Secretary of the Interior Fred A. Seaton said recently.

Visitors may now take self-guided or "do-it-yourself" tours through the two powerplants any day of the year between 8 a.m. and 8 p.m. There is no charge for admission. Following directional signs, visitors may reach the generator, control room, and turbine floors where—at the touch of a button—voice transcriptions explain the purpose and operation of the structures.

Commissioner of Reclamation W. A. Dexheimer said that, like the conducted tour of Hoover Dam and Powerplant (67 miles upstream from Davis Dam), the self-guided tours of Davis and Parker Dams will become a top tourist attraction of the lower Colorado river area. Some 6½ million persons have taken the guided tour of Hoover Dam since it was opened to the public in 1937.

Davis Dam, an earth and rock-rill embankment with a concrete spillway, intake structure and powerplant, was completed by the Bureau of Reclamation in 1950. The Davis Powe with an installed capacity of 2 kilowatts, generated its first early in 1951. Davis Dam, with ments in Nevada and Arizon constructed primarily to serve sions of the Mexican Water T The dam also contributes to tion, fish and wildlife protecti related purposes. The Davis P plant adds substantially to the rado River hydroelectric energ which serves southern Californi zona and southern Nevada.

Parker Dam, constructed b Bureau of Reclamation with advanced by the Metropolitan District of southern California vides a forebay and desilting bas the District's Colorado River duct, which supplies municipal a dustrial water to the Los Angel San Diego coastal areas. P Dam, a concrete barrel arch ture spanning the river between fornia and Arizona, was comple 1938. The Parker Powerplant w installed capacity of 120,000 kilo generated its first power in 1942 of the energy generated by the P Powerplant is used for pumpin ter along the aqueduct. Other P Dam benefits include flood co regulation of water, recreation fish and wildlife.

Catalog Describes New Li Of Record Files, Inc.

Record Files, Incorporated Wooster, Ohio has announced a 16-page catalog on their new an proved line of files for the tabul phase of industry. All files wh they are for inactive retention o housing of active cards are ava in standard or nylo-glide.

Drawers in most files are equi with handles, front and back for in carrying and each drawer h own positive lock compressor w assures perfect condition of tabul cards. Files are available in tw four drawer units and can be l together side-to-side, back-to-ba top-to-bottom to form rigid batt Leg or standard flat-base units available as well as mobile units can be tailored to fit any require

The latest development is the transport case which enables an to carry a tabulating card drawer a suitcase, to any desired loc without the danger of spilling c For a free copy of this catalog, Record Files, Incorporated, Woo Ohio.

Twofold Benefits From The

Analysts Journal

1. Its timely articles by the nations leading security analysts and economists keep you informed as to methods and trends in the security markets. You will be better able to present your company in its most favorable light if you know the trend of financial thinking as expressed in the official publication of the Security Analysts.

2. Its advertising pages provide a means of putting your story across to the Analysts. There is no more direct and effective way to contact this influential group of investment specialists than to advertise in their own quarterly Journal.

To Keep Abreast of Investment Markets

READ THE ANALYSTS JOURNAL

•

To Keep Investment Markets Abreast of Your Company

ADVERTISE IN THE ANALYSTS JOURNAL

PUBLISHED QUARTERLY BY THE NEW YORK SOCIETY OF SECURITY ANALYSTS

THE ANALYSTS JOURNAL
20 Broad Street, Room #908
New York 5, N. Y.

Gentlemen:

☐ *Please enter my subscription for one year at the subscription rate of $5.00—United States; $5.50—Canada.*

☐ *Please send me your advertising brochure.*

Name .....

Address .....

.....

.....

PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants, and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design, and construction.

BLACK & VEATCH
CONSULTING ENGINEERS
Electricity, Natural Gas and Water Utilities
Production, Transmission, Distribution
Reports, Design, Supervision of Construction
Investigations, Valuation and Rates
1500 MEADOW LAKE PARKWAY, KANSAS CITY 14, MISSOURI (SINCE 1915)

DAY & ZIMMERMANN, INC.
ENGINEERS
NEW YORK PHILADELPHIA CHICAGO
DESIGN, CONSTRUCTION, REPORTS, APPRAISALS AND MANAGEMENT

DRAKETOWN
PROPANE PLANTS
★ Standby
★ Augmentation
★ 100% Town Supply
Design • Engineering • Construction
DRAKE & TOWNSEND INCORPORATED 11 WEST 42ND STREET NEW YORK 36, N. Y.

F B&D
Ford, Bacon & Davis
VALUATION REPORTS Engineers CONSTRUCTION RATE CASES
NEW YORK • CHICAGO • LOS ANGELES

GH
GIBBS & HILL, INC.
Consulting Engineers
DESIGNERS • CONSTRUCTORS
Los Angeles NEW YORK Tampa

GAI
FOUNDED 1906
GILBERT ASSOCIATES, INC.
ENGINEERS • CONSULTANTS • CONSTRUCTORS
607 WASHINGTON ST.
READING, PA.
• WASHINGTON • PHILADELPHIA • NEW YORK

Mention the FORTNIGHTLY—*It identifies your inquiry*

PROFESSIONAL DIRECTORY
(continued)

W. C. GILMAN & COMPANY
CONSULTING ENGINEERS
ELECTRIC — GAS — TRANSIT — WATER
Financial and Economic Reports
Valuations—Rate of Return—Depreciation Studies
Traffic Surveys—Fare Analyses
55 Liberty Street **New York 5, N. Y.**

GUSTAV HIRSCH ORGANIZATION, INC.
1347 West 5th Ave., Columbus (12) Ohio
Telephone Hudson 8-0611
Consulting and Supervisory Engineers and Contractors
Construction and Operation of Utility Enterprises

HOOSIER ENGINEERING COMPANY
Erection and Maintenance of
Electrical Transmission and Distribution Lines
1384 HOLLY AVENUE • COLUMBUS, OHIO

JENSEN, BOWEN & FARRELL
ENGINEERS
ANN ARBOR, MICHIGAN
APPRAISALS—INVESTIGATIONS—DEPRECIATION STUDIES—
COST TRENDS — REPORTS
for Rate Cases, Security Issues, Regulatory and Accounting Requirements
ORIGINAL COST AND CONTINUING PROPERTY RECORD
DETERMINATION

The Kuljian Corporation
ENGINEERS • CONSTRUCTORS
POWER PLANT SPECIALISTS
DESIGN • CONSTRUCTION MANAGEMENT
SURVEYS • INVESTIGATIONS • REPORTS
1200 N. BROAD ST., PHILADELPHIA 21, PA.

William S. Leffler, Engineers Associated
Utility Management Consultants for past 35 years Specializing in
GAS
ELECTRIC
WATER
DEVELOPMENT OF CLASS RATES OF RETURN AND
CLASS UNIT COST DETERMINATIONS FOR
RATE STRUCTURE MODERNIZATION AND RATE CASES
REGULATORY and MUNICIPAL PROBLEMS
Send for brochure: "The Value of Cost Analysis to Management"
DARIEN, CONNECTICUT

(Professional Directory Continued on Next Page)

PROFESSIONAL DIRECTORY *(continued)*

MIDDLE WEST SERVICE COMPANY

Business and Engineering Consultants

(INCLUDING JAY SAMUEL HARTT CONSULTING ENGINEERS)

Organization • Corporate Practices • Accounting • Budgeting • Financing • Taxes • Stock Transfer • Appraisals • Valuations • Economic Analysis • Cost of Money Studies • Depreciation Studies • Engineering • System Planning • Industrial Engineering • New Business • Rates • Pricing Sales and Marketing • Safety • Insurance • Pensions • Employee Welfare • Public Relations • Advertising • Personnel • Industrial Relations

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

Pioneer Service & Engineering Co.

CONSULTING, DESIGNING AND OPERATING ENGINEERS
PURCHASING

231 SOUTH LA SALLE STREET

SPECIALISTS IN
ACCOUNTING, FINANCING, RATES, INSURANCE AND DEPRECIATION

CHICAGO 4, ILLINOIS

SANDERSON & PORTER

CONSTRUCTION • REPORTS
SURVEYS

NEW YORK

S&P

NEW YORK

Sargent & Lundy

ENGINEERS

Steam and Electric Plants
Utilities—Industrials
Studies—Reports—Design—Supervision

Chicago 3, Ill.

Stone & Webster

ENGINEERING CORPORATION

DESIGN • CONSTRUCTION
REPORTS • APPRAISALS
EXAMINATIONS
CONSULTING
ENGINEERING

New York Boston Chicago Pittsburgh Houston
San Francisco Los Angeles Seattle Toronto

The J. G. WHITE ENGINEERING CORPORATION

Design—Construction—Reports—Appraisals
Consulting Engineering

80 BROAD STREET NEW YORK 4, N. Y.

Whitman, Requardt and Associates

DESIGN — SUPERVISION

REPORTS — VALUATIONS

1304 ST. PAUL STREET

Publishers of the 35-year-old
HANDY-WHITMAN INDEX
for Public Utility
Construction Cost Trends
Including Hydro-Electric Properties

BALTIMORE 2, MARYLAND

Mention the FORTNIGHTLY*—It identifies your inquiry*

PROFESSIONAL DIRECTORY *(concluded)*

Abrams Aerial Survey Corporation

Topographic and Planimetric Maps
Mosaics, Plans & Profiles for all
Engineering work.

Abrams Bldg. Lansing, Mich.

PETER F. LOFTUS CORPORATION

Design and Consulting Engineers

Electrical • Mechanical • Structural
Civil • Thermodynamic • Architectural

FIRST NATIONAL BANK BUILDING
Pittsburgh 22, Pennsylvania

BURNS & McDONNELL

Engineers - Architects - Consultants

KANSAS CITY, MO.
P.O. Box 7088
Phone: DElmar 3-4375

LUTZ & MAY COMPANY

Consulting Engineers

STEAM, GAS & DIESEL POWER STATIONS
PUMPING PLANTS—ELECTRIC SYSTEMS
REPORTS—DESIGNS—APPRAISALS

1009 Baltimore Kansas City 6, Mo.

EARL L. CARTER

Consulting Engineer

REGISTERED IN INDIANA, NEW YORK, OHIO
PENNSYLVANIA, WEST VIRGINIA, KENTUCKY
Public Utility Valuations, Reports and
Original Cost Studies

910 *Electric Building* *Indianapolis, Ind.*

MINER AND MINER

CONSULTING ENGINEERS

INCORPORATED

GREELEY COLORADO

ENGINEERS, CONSTRUCTION AND MAINTENANCE CONTRACTORS
for the GAS INDUSTRY

CONSOLIDATED GAS AND SERVICE CO.
327 So. LaSalle St., Chicago 4, Ill.

PITTSBURGH TESTING LABORATORY

Radiography—Soils Mechanics
Testing—Inspection—Analysis

Main Office Pittsburgh, Pa.
32 Laboratories in Principal Cities

GANNETT FLEMING CORDDRY AND CARPENTER, INC.

ENGINEERS

HARRISBURG, PENNSYLVANIA

Investigations—Reports—Appraisals
Original Cost and Depreciation Studies
Rate Analyses—Insurance Surveys

A. S. SCHULMAN ELECTRIC CO.

Electrical Contracting Engineers

founded 1890

POWER STATION—INDUSTRIAL—
COMMERCIAL—TRANSMISSION LINES—
DISTRIBUTION

2416 S. MICHIGAN AVE., CHICAGO, ILL.
Los Angeles Tampa

FRANCIS S. HABERLY

CONSULTING ENGINEER

Valuation — Depreciation
Investigations and Reports

122 SOUTH MICHIGAN AVENUE, CHICAGO

The R. W. STAFFORD CO.

GAS CONSULTANTS — ENGINEERS
CONSTRUCTORS

Natural Gas Conversions
Plant Management & Operation
Accident & Insurance Investigations
Peak Shaving & Standby Plants

EVANSTON, ILLINOIS
2944 Grant St. Phone UNiversity 4-6190

JACKSON & MORELAND INC.

Engineers and Consultants

Design and Supervision of Construction
Reports — Examinations — Appraisals
Machine Design — Technical Publications

Boston New York

SVERDRUP & PARCEL, INC.

Engineers — Architects

Design, Construction Supervision
Steam and Hydro Power Plants
Power Systems — Industrial Plants
Studies — Reports

St. Louis • San Francisco • Washington

INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

A

Abrams Aerial Survey Corporation 37
*Allen & Company .....
*Allis-Chalmers Manufacturing Company .....
*Amp Incorporated .....
American Appraisal Company, The 28
*American Telephone & Telegraph Company .....
Analysts Journal, The 33

B

Babcock & Wilcox Company, The 4-5
Beckman Instruments, Inc. 26
*Bell Helicopter Corp. .....
Black & Veatch, Consulting Engineers 34
*Blyth & Company, Inc. .....
Burns & McDonnell Engineering Company 37

C

Carter, Earl L., Consulting Engineer 37
*Cating Rope Works, Inc. .....
Cleveland Trencher Company, The 30
Columbia Gas System, Inc., The 16
Combustion Engineering, Inc. 14-15
Commonwealth Associates, Inc. 24
Commonwealth Services, Inc. 24
Consolidated Gas and Service Company 37

D

Day & Zimmermann, Inc., Engineers 34
Delta-Star Electric Division, H. K. Porter Company, Inc. 23
Dodge Division of Chrysler Corp. 29
Drake & Townsend, Inc. 34
Dresser Industries, Inc. ..... Outside Back Cover

E

*Eastman Dillion, Union Securities Corporation .....
*Ebasco Services Incorporated .....
*Electro-Motive Division, General Motors .....

F

*First Boston Corporation, The .....
Ford, Bacon & Davis, Inc., Engineers 34

G

Gannett Fleming Corddry and Carpenter, Inc. 37
General Electric Company ..... Inside Front Cover
Gibbs & Hill, Inc., Consulting Engineers 34
Gilbert Associates, Inc., Engineers 34
Gilman, W. C., & Company, Engineers 35
*Glore, Forgan & Company .....

H

Haberly, Francis S., Consulting Engineers 37
Halsey, Stuart & Company, Inc. 31
*Harriman, Ripley & Company .....
Hirsch, Gustav, Organization, Inc. 35
Hoosier Engineering Company 35

I

*International Business Machines Corp. .....
*International Harvester Company, The .....
Irving Trust Company 27

J

Jackson & Moreland, Inc., Engineers 37
Jensen, Bowen & Farrell, Engineers 35
*Justrite Mfg. Company .....

K

*Kellogg, M. W., Company, The .....
Kerite Company, The 7
*Kidder, Peabody & Company .....
*Kuhn Loeb & Company .....
Kuljian Corporation, The 35

L

*Langley, W. C. & Co. .....
Leffler, William S., Engineers Associated 35
*Lehman Brothers .....
*Loeb (Carl M.) Rhodes & Co. .....
Loftus, Peter F., Corporation 37
Lutz & May Company, Consulting Engineers 37

M

*Main, Chas. T., Inc., Engineers .....
*McCabe-Powers Auto Body Company .....
*Merrill Lynch, Pierce, Fenner & Beane .....
Middle West Service Company 36
Miner and Miner 37
*Morgan Stanley & Company .....
Morysville Body Works, Inc. 28
*Motorola Communications & Electronics, Inc. .....

N

National Association of Railroad & Utilities Commissioners 18
Newport News Shipbuilding & Dry Dock Co. 13
*Nuclear Development Associates, Inc. .....

O

*Osmose Wood Preserving Co. of America, Inc. .....

P

*Pacific Pumps, Inc. .....
*Parkersburg Rig & Reel Company, The .....
Pioneer Service & Engineering Company 17, 36
Pittsburgh Testing Laboratory 37

R

Recording & Statistical Corporation 11
Remington Rand Div. of Sperry Rand Corp. 9
Robertson, H. H., Company 19

S

Sanderson & Porter, Engineers 36
Sargent & Lundy, Engineers 36
Schulman, A. S., Electric Co., Engineers 37
*Smith, Barney & Company .....
*Sprague Meter Company, The .....
Stafford, R. W., Company, The, Consultants 37
Stone and Webster Engineering Corporation 36
Sverdrup & Parcel, Inc., Engineers 37

T

*Texas Eastern Transmission Corporation .....

W

Westinghouse Electric Corporation ..... 20, Inside Back Cover
White, J. G., Engineering Corp., The 36
*White, Weld & Co. .....
Whitman, Requardt and Associates 36

Y

*Yawman and Erbe Mfg. Co. .....

Professional Directory 34-37

*Fortnightly advertisers not in this issue.

7
35
35
37
37
36
37
28
18
13
17, 36
37
11
9
19
36
36
37
37
36
37
Cover
36
36
—JULY

Your Westinghouse representative can prove...

YOU GAIN 12"-17" HOT LINE CLEARANCE

and eliminate pinched fingers with new, exclusive Westinghouse eyebolt, I-beam mounting (3-50 kva). Forged steel eyebolt seated in forged steel I-beam. Tensile strength is independent of cover. Every transformer is production-line pull-tested for 200% safety factor.

OU CAN BE SURE...IF IT'S

stinghouse

ack McQuillan, Director of General Services, West enn Power, and Don Burns, Westinghouse repre- entative. "The eyebolt construction is a major safety mprovement in pole-type distribution transformers" .. Mr. McQuillan. J-70792

Growing Caracas need never go thirsty!

Down the mountains of Venezuela into Caracas, run 17 miles of 48" water line, tightly joined by nearly 4,000 steel couplings from Dresser Manufacturing Division, one of the Dresser Industries.

Throughout the world, over half-a-million miles of pipe have been joined with Dresser couplings. Fittings as small as three-eighths of an inch, or so huge that a large truck can be driven through them, are not uncommon in Dresser production. Whether lines are rigid or flexible, carry air, gas, petroleum, power, chemicals, steam or water, Dresser provides guardians of safety... leakproof, weather-proof, quickly and easily applied.

Operating independently in its specialized field, each Dresser company possesses the experience, facilities and engineering manpower to meet the progressive needs of the industries it serves. Whenever an unusually challenging problem is put before any Dresser operating unit, the research, engineering and production facilities of all the divisions of Dresser Industries, Inc. can be swiftly mobilized into efficient and effective teamwork.

Coordinated performance... the Dresser Plus +

Throughout the oil, gas, chemical, electronic and other industries, this coordinated performance is known as the Dresser *Plus* +...a standard of comparison the world over. Send for your free copy of "Briefacts" which gives the fascinating story of Dresser achievements in diversified fields.

Tomorrow's progress planned today

DRESSER INDUSTRIES, INC.

INDUSTRIAL EQUIPMENT
TECHNICAL SERVICES
OIL • GAS • CHEMICAL • ELECTRONIC

CLARK · IDECO · DRESSER MANUFACTURING DIVISION · UTHERSON · IDECO

LANE-WELLS · Magcobar · PACIFIC · ROOTS-CONNERSVILLE · Security

REPUBLIC NATIONAL BANK BUILDING, DALLAS 21, TEX